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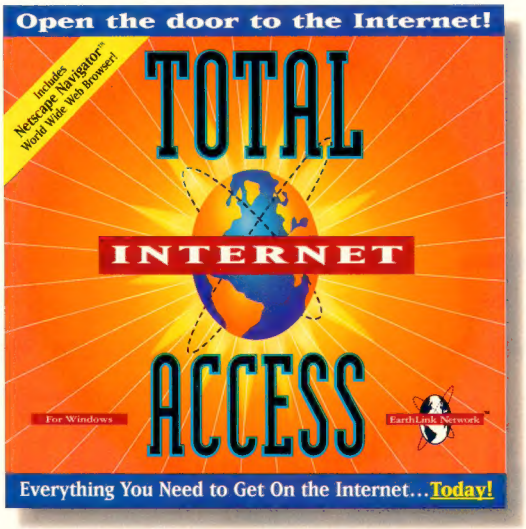
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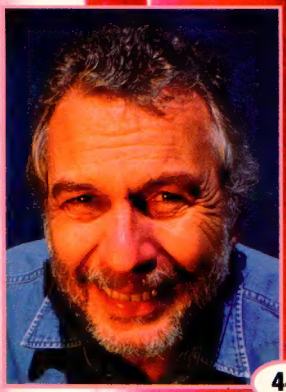
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COVER: Our model, the always willing Dean Hager, is sporting a used Levi's jacket (Salvation Army, $5) with mismatched Cartier designer welder goggles (Tiffany's, $900) and hair by Bo-Rics ($6.50)





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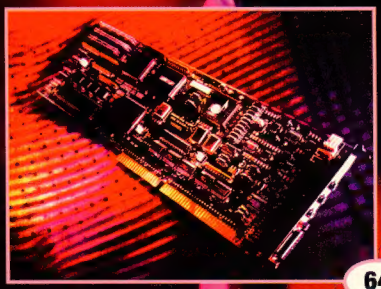
Will the Machine of the Future Stay Down for the Count or Can the Struggling Company Deliver an M2 Knockout?



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CRITICAL MASS

THE FUTURE IS HERE...

Welcome to the first of what we hope will be many installments of FUSION magazine. Why FUSION? Why now? It's simple: Entertainment is changing every day, and the impact that technology has in the way we play is getting larger every time you turn around.

FUSION is more than just video games and computer curios. It is the first magazine to address all aspects of electronic entertainment—from the alternate realities living inside your PC to the man-made realities in film. FUSION examines the growing role that new technologies are playing when you are.

FUSION is part games, part entertainment and totally interactive. We'll zap you to the hottest spots on the Internet, preview the best places to go online and give you a sneak peek at the entertainment mediums of tomorrow.

In the future you'll be able to sample the latest creations from the most talented minds on the Trans-FUSION cd.rom or choose from hundreds of programs on the Trans-FUSION Net site on the World Wide Web (http://www.Transfusion.com). And you'll always be able to rely on FUSION to give you the straight story on new products, personalities and interactive inventions that will improve the way you entertain yourself and others.

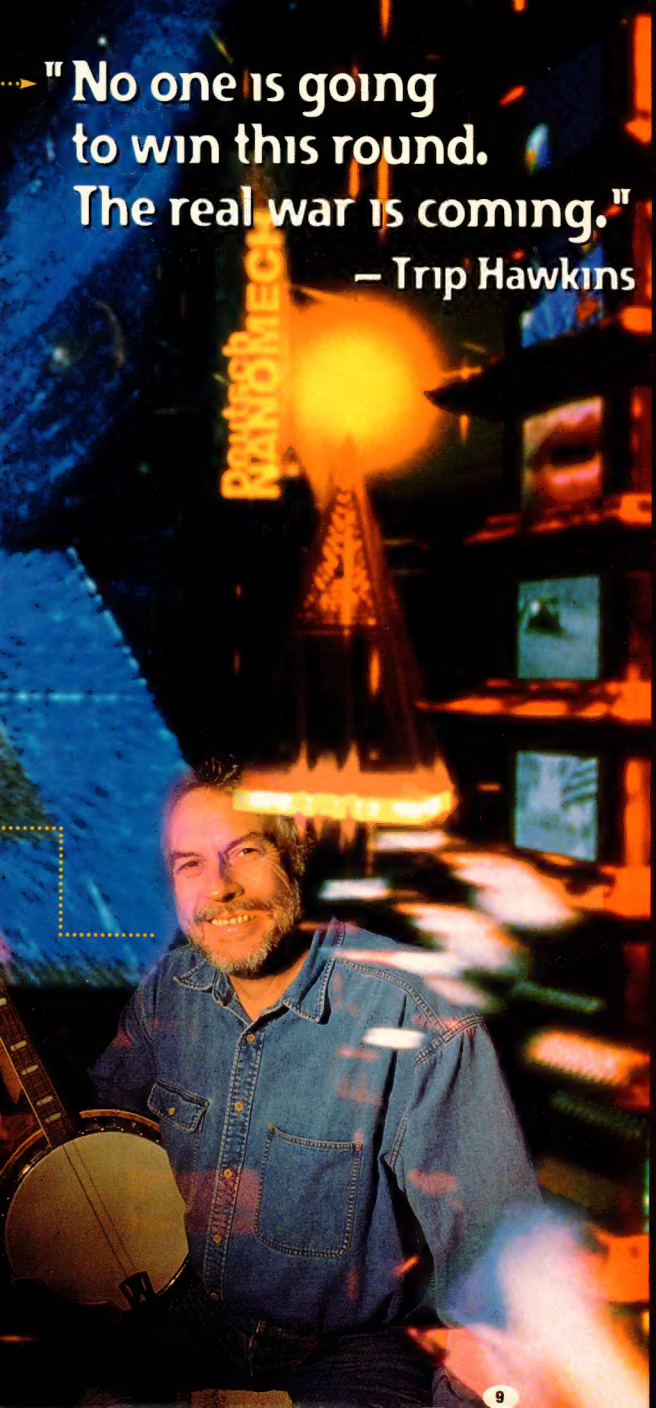
Most of all, FUSION will live up to its name and meld these different forms of entertainment into one easy package that's filled with information and opinion from cover to cover. Our mission is to keep you informed and entertained with stories and reviews you won't find anywhere else.

- The Management



"I sold Atari too early and Chuck E. Cheese too late ... this time I'll get it right."

– Nolan Bushnell



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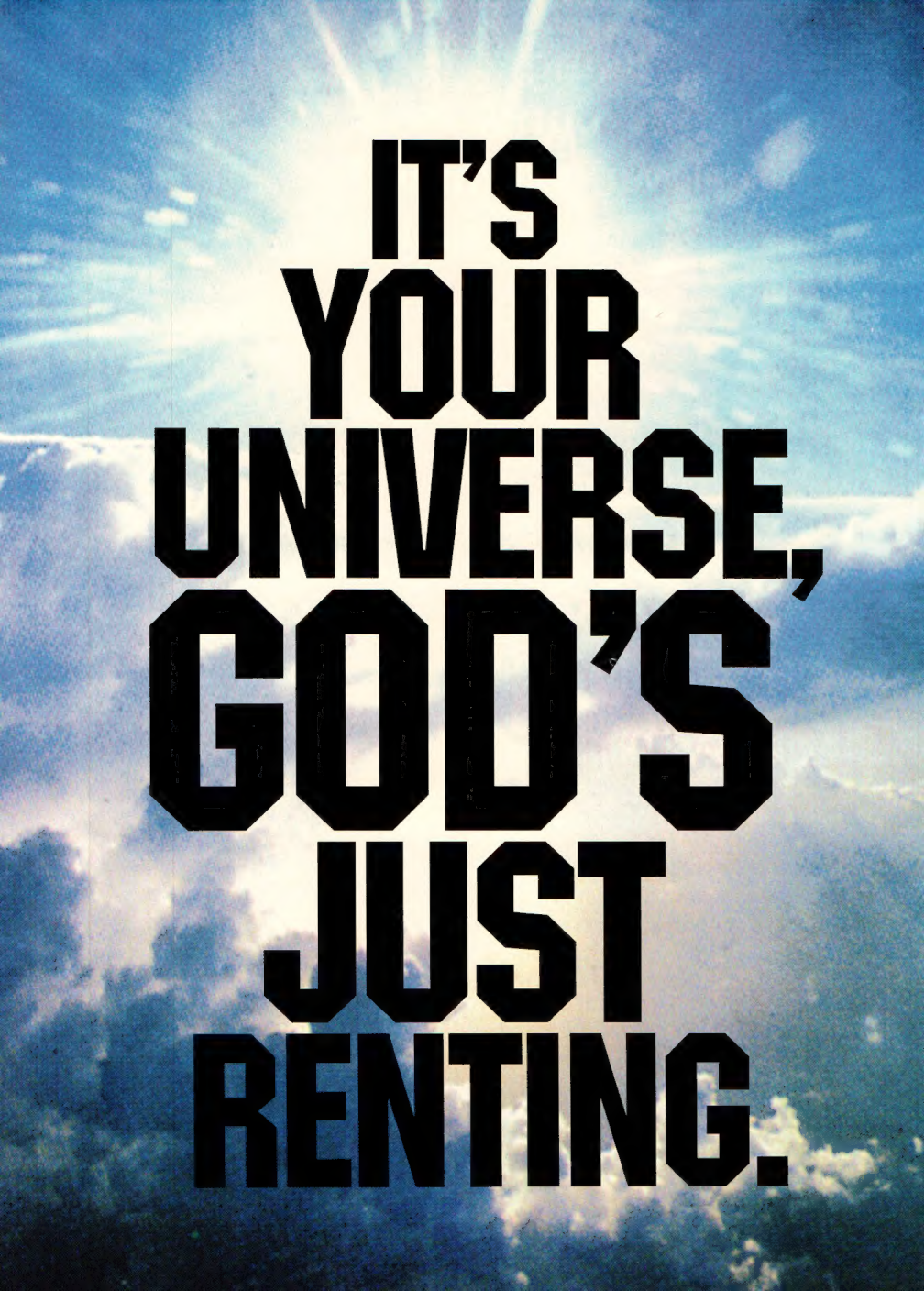
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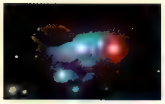
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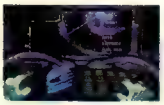

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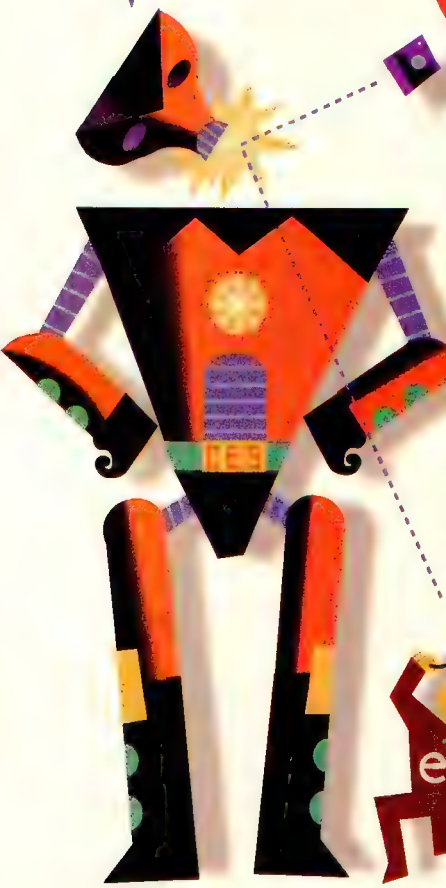
MILLENNIA: ALTERED DESTINIES. THE ULTIMATE GOD GAME.

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TAKE 2

David Slays Goliath

E³ Basks in the Glory of a Resounding Success Over CES



David Cowles

Just as this issue went to press, Nintendo announced its pullout from the Winter Consumer Electronics Show, in favor of the E³ show in Los Angeles next May. Chairman of Nintendo America Howard Lincoln explained, "A single trade show commitment will allow us more flexibility in directly communicating our many business plans throughout the year."

Sega almost dropped out of the show in 1995, so when word came they would skip the '96 CES, it came as no real surprise. Sega spokesperson Terry Tang confirmed "Sega decided they no longer want to be part of the CES show. We will support one show, E³."

DOES THIS BEGIN A STAMPEDE?

While Nintendo's and Sega's decision certainly impacts the plans of other console manufacturers, it's too early to tell who'll follow suit.

"We have not yet decided," Ron Beltrama of Atari remarked, "but Nintendo's departure will be a factor."

Sony and 3DO representatives commented their companies would be in attendance, but it is unclear to what degree.

Conversely, Gold Star and Panasonic plan to be at CES, with 3DO displays, while Philips will be there with CD-i.

WHY E3 WON ... FOR NOW

It was a first, an entire convention devoted to interactive entertainment. The new Los Angeles Convention Center was scrubbed to a high polish. Mariachi and ragtime bands serenaded virtually all the major players of a growing industry.

"Most exhibitors were overwhelmingly satisfied," said Valerie Hennigan, marketing manager for the E³ convention. "For the first time we were able to present ourselves as an industry, all together under one roof ... what came out of it was enthusiasm for the industry as a whole and optimism for its future growth. Whatever CES does, it will probably be a much different focus than we have."

Beltramo agrees. "It was very focused; we had people who were interested only in our industry. At the CES shows there were a lot of exhibitors and people who were unrelated to our business. It was well done, and well organized. I think there's a very strong possibility that Atari will go back next year."

The next E³ is scheduled for May 30-June 1, 1996 in Los Angeles. The group is also planning E³ shows in Tokyo, in concert with publisher IDG, in August 1996 as well as further foreign expansion into Latin America and Europe.

CE GROUP FIRES BACK

While the Electronic Industries Association's Consumer Electronics Group suffered a major blow this year when the Summer CES was canceled, it now plans to fight back. While EIA won't take on E³ directly in '96, it will back CES Orlando, The Digital Destination, May 23-25, 1996 in Florida.

"Our Orlando show is focused on digital technologies," said Cynthia Upson, spokesperson for EIA/CEG. "We're going from analog to a digital world," Upson explains. "With new technologies being introduced, some products will be showcased in '96, whether or not they're available for market. Retailers will want to see these products, and this show is dedicated to them."

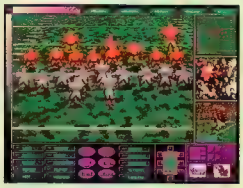
Creating A Joint For The Future

Microsoft and Softbank Combine Forces to Form Gamebank

At the tail end of June, Microsoft Co., Ltd and the Softbank Corporation announced the formation of Gamebank, a joint venture created to publish and promote computer game software for the Microsoft Windows95 operating system.

"At the announcement, [Microsoft head] Bill Gates characterized it as a very easy decision for Microsoft to do this venture," says Jeff Camp, business development manager for Microsoft's Far East Region.

Gamebank will *not* be designing original products but instead will be porting existing console video games to Windows95.



NCAA FOOTBALL

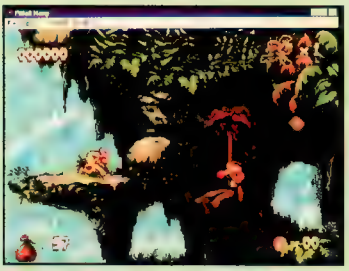
"There are all these very innovative game developers who have a great deal of momentum and experience in game developing," Camp comments. "They can work on developing the great games, and Gamebank will focus on providing porting services and in bringing those games to the PC market. Essentially Gamebank wants to help these game publishers reach their market on the PC, not to compete with them.

"The release of Windows95 and our Windows95 software developer's kit creates a technical opportunity for games on the PC platform that didn't exist before. Previously, anyone who wanted to try and create entertainment products for PCs was pretty much stuck with MS-DOS because game functionality wasn't a high design priority for Windows 3.1—[however] we changed that priority considerably in the creation of Windows95."

This change in priority should conceivably bring PC game response speeds up to par with the console systems. As well it should, Camp comments. "There's every reason in the world to expect that a $1,500 general purpose multimedia PC device should be able to do many of the same things that a dedicated purpose $500 multimedia game console device can do."

Microsoft and Softbank have already lined up the support of nine Japanese video game manufacturers, who say they intend to work with Gamebank. The list includes the Artdink Corporation, Bandai Co., Ltd., Capcom Co., Ltd., Chun Soft Co., Ltd., Namco Ltd., SNK Corp., Takara Co., Ltd., Taito Corp., and T&E Soft, Inc.

The decision to align themselves with these companies is largely samaritan, Camp says. "The purpose there is that there's a lot of innovation in Japan and there's an opportunity for us to help those game vendors move to Windows95 and assist in the publishing of those games for a PC environment, because they don't have a lot of experience in publishing for the PC market. Their expertise has been in the game console market."



PITFALL HARRY

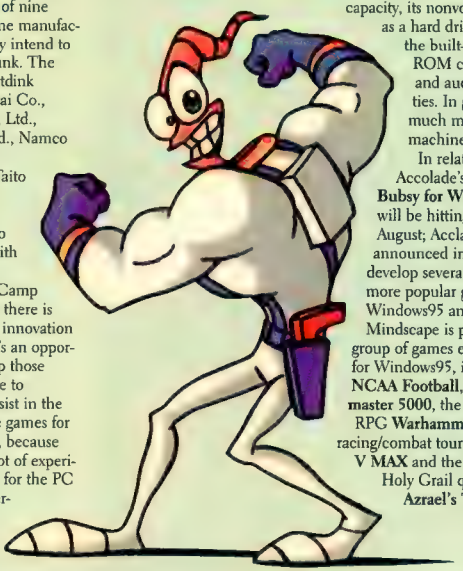
The actual porting of the games will be handled by Kinesoft, an Illinois-based software developer that was partially acquired by the Gamebank venture in June.

At press time, Gamebank had not released news of which games were initially being ported from the Japanese companies (though it is easy enough to conceive that Capcom's **Street Fighter II** should be among the beginning onslaught).

Aside from planning to port the Japanese games, Kinesoft is currently working to bring the popular games **Pitfall Harry** and **Earthworm Jim** to Windows95. "We are working on a variety of ports for a variety of people," Kinesoft CEO Peter Sills remarks.

The introduction of Windows95 will increase the functionality of PCs, making them a superior gaming platform, says Sills.

"On the PC, we can provide much higher resolution, richer colors, better sound and a much richer game play experience through the additional capabilities of the PC. For instance, we can have online play, we can have network play. We can support all the variety of features that a PC can because of its greater memory capacity, its nonvolatile storage as a hard drive, as well as the built-in CD-ROM capabilities and audio capabilities. In general, it's a much more flexible machine."



In related news, Accolade's **Super Bubsy for Windows95** will be hitting stores this August; Acclaim has announced intentions to develop several of their more popular games for Windows95 and Mindscape is producing a group of games exclusively for Windows95, including **NCAA Football**, **Chessmaster 5000**, the fantasy RPG **Warhammer**, racing/combat tour de force **V MAX** and the hi-tech Holy Grail quest **Azrael's Tears**.

Digistar II Premieres

The world's most advanced digital, computer-operated, planetarium star projector system was installed at Hansen Planetarium in Salt Lake City, Utah, by Evans & Sutherland Computer Corp.

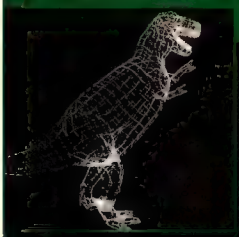
In a large domed theater, Digistar II takes audiences through operator-controlled time and space where star images move in a three-dimensional effect. The audience experiences the feeling of being immersed in virtual reality. Digistar creates any image composed of lines and points and can carry participants through buildings, cities, clouds or images yet unimagined.

"Digistar II is well suited to providing an 'edutainment' experience by giving our customers the ability to produce shows that are both educational and fun," said Les Horwood, general manager of entertainment and education systems for E&S.

Digistar II's predecessor projected images in a mechanical, real-time manner.

Digistar's unique and most exciting feature is its capacity to simulate 3-D space travel. It is smaller, easier to operate and makes stars appear brighter.

Evans & Sutherland will install 10 more Digistar II projectors worldwide in the months to come, along with an upgrade to the one now in use at the United States Air Force Academy in Colorado Springs, Colo.



T-REX CONSTELLATION: Digistar blows away outdated conventional Planetarium projectors.



The Old IN's & OUT's

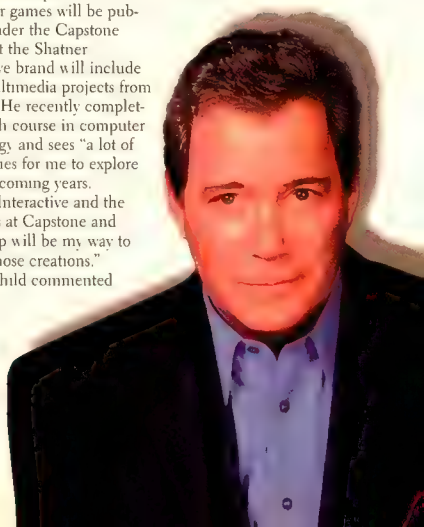
OUT	IN
Movies w/dinosaurs	Movies w/monkeys
Michael Jackson	*Jackson 5* cartoons
32X	PlayStation
Jim Carrey	Elastica
MK3	MK Ultra
Red Dog	Pete's Wicked Red
Leather pants	Mylar Pants
O.J. Simpson as a hero	Homer Simpson as a hero
White Power	White Zombie
Power Rangers	New York Rangers
Pac-Man Fever	Ebola virus

Kirk Captains IntraCorp

IntraCorp president Leigh Rothschild and William Shatner, the *TekWar* series' creator, announced the Shatner Interactive brand under IntraCorp.

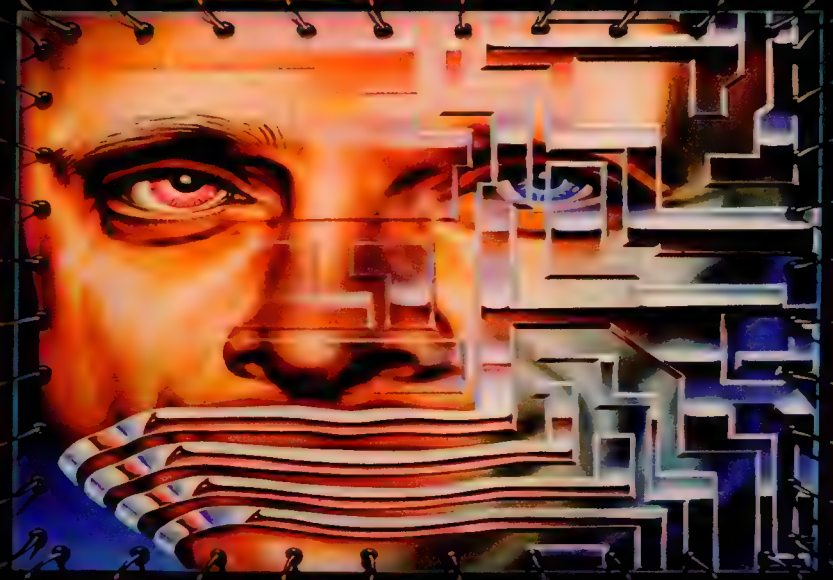
TekWar games will be published under the Capstone label, but the Shatner Interactive brand will include other multimedia projects from Shatner. He recently completed a crash course in computer technology and sees "a lot of possibilities for me to explore over the coming years. Shatner Interactive and the fine folks at Capstone and IntraCorp will be my way to realize those creations."

Rothschild commented that "It's been a blast to work with Bill on the TekWar game. I'm so happy to be able to extend our relationship beyond *TekWar* into other projects of Bill's."



HARLAN ELLISON

I HAVE NO MOUTH, AND I MUST SCREAM

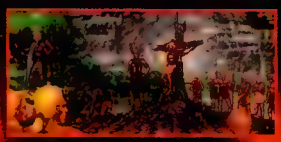


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Blade Runner Redux

VIE Perseveres Through the Red Tape, and Plans a Killer Game

Virgin Interactive recently announced the formation of a joint venture with The Blade Runner Partnership to create a game based on the sci-fi classic *Blade Runner*—the 1982 Ridley Scott film that many fans consider the beginning of the dark, technologically decadent vision of the future which defines the cyberpunk literary movement.

While the game will contain many of the story and setting elements of the cult favorite, it will be built around an original script. "We are committing tremendous resources to the project," said Martin Alper President of Virgin Interactive Entertainment, "which won't just be a rehash of the film, but a truly interactive experience



that exploits all the wonderful opportunities provided by the original story line."

The film is loosely based on Phillip K. Dick's *Do Androids Dream of Electric Sheep?* Harrison Ford plays the Blade Runner—a 21st century cop who must hunt a troupe of "replicants," powerful humanoids manufactured by genetic engineers, who have rebeled against their drudgery in the space colonies and come to Earth. The cop must contend with a constantly shifting view of reality and the fact the he may be artificial himself (this is more apparent in Dick's novel and the director's cut of the film).

Louis Castle, cofounder of Westwood Studios, remarked, "We are going to stay true to the *Blade Runner* universe. The artwork will be far beyond what we are already delivering for Lands of Lore II, and will be all 3-D rendered, video captured, motion captured."

Slated to wrap up production in fall of '96, the game is being developed for PC and MAC CD-ROM, Windows and Windows95.

TOP GAMES

This list prepared by PC Data, is based on units sold in over [illegible] stores.

VIDEO

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]

CD ROM

1. [illegible]
2. [illegible]
3. [illegible]
4. [illegible]

PC

1. [illegible]
2. [illegible]
3. [illegible]
4. SimCity 2000, Maxis

This Boy's a Chip off the ol' BLOCKBUSTER

Many video game players will get their first look at Virtual Boy this August, through a special deal Nintendo has cooked up with Blockbuster and NBC-TV. Blockbuster Video stores will receive 20,000 Virtual Boy systems and 36,000 software titles. Until the end of 1995, gamers can rent the hardware and two games, for two nights, for $9.99. They'll also get a $10 discount coupon to be used toward the purchase of a Virtual Boy.

NBC is participating with a nationwide sweepstakes. Mail in game pieces will be available at Blockbuster stores, and $200,000 prizes will be given, including hardware, software, hats, shirts and trips to the sets of some NBC shows.



VIRTUAL RENTAL: Please remember to return V-Boy in clean, working order or else!



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INTEL/AT&T WILL LINK VIA CABLE

Intel and AT&T have agreed to work together to link PCs to networks via TV cables. Potential customers for this technology include network, phone or cable companies that plan to build a hybrid fiber-optic coaxial cable network (sometimes called hybrid fiber coax) to reach individual homes.

Tom Waldrop, spokesman for Intel, explained, "Cable has huge capabilities, an enormous data pipe and it passes through most homes. Because it is already there and has such a huge band width, it's an ideal choice to bring data into home PCs."

Presently, phone modem connections to the Internet crawl along at 14,400 or in some cases, 28,800 Bits per second. Accessing video or audio in this manner is slow, even though most home PCs are capable of showing video at much faster speeds.

Cable, with its raw bandwidth of over 3 billion Bits per second, can provide a much speedier connection. Most of the width is used for TV, but systems now in development can send 27 million Bits per second into the home.

"High-speed data service can be done with one-way cable by using the telephone network as the return path."



Currently only about 15 percent of the nation's cable systems are capable of two-way communication. That's where the Intel/AT&T deal kicks in: High-speed data service can be done with one-way cable by using the telephone network as the return path. No one denies that two-way broadband is better. But if a one-way cable service wants to deliver interactive data services to PCs, they can use the phone as the return path. Intel will provide the connector to link the PC to a coaxial cable, so it can communicate over this broadband network.

Waldrop explained, "There is an obstacle within cable on the return path. The cable infrastructure, all the coaxial cables that run down the street and into people's homes, acts likes a big antenna. It picks up a lot of interference ... we are developing some very sophisticated techniques to clean this up."

Since cable companies already have the infrastructure in place to address these limitations, it makes sense for them to seize the opportunity. Avram Miller, Intel VP of corporate business development, predicts that, "The rapid growth of online services and the Internet is just the beginning. The intersection of powerful home computing and high bandwidth communications is creating the first new medium since the invention of television." ●

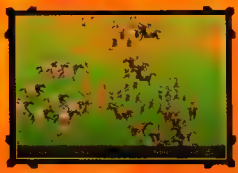
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World Wide Web: http://www.pathfinder.com/twi • ©1995 Time Warner Interactive. Conqueror: A.D. 1086 is a trademark of Software Sorcery.

Devo Founder Whips Up CD-ROM

Inscape is presently working on **Devo Presents Adventures of the Smart Patrol**, an interactive game scheduled for October release for Macintosh and PC CD-ROM. using live action and animation to create a futuristic social satire.



GERALD CASALE: co-founder of Devo

Gerald Casale, co-founder of Devo, talked about his involvement with the game industry: "We were always interested in multimedia and interactivity when it was still on paper. We kept thinking it was going to come faster than it did. By the time we came to the point that a large segment of society is able to participate, Devo no longer existed.

"I took an idea I had while in Devo that had never been used, [one] that anticipated this kind of technology. Michael Nash [president of Inscape Technology] liked the idea, so he's basically shepherding me through the project and backing this idea."

It has to be said the main characters of the game ... kind of mirror Devo. "It's a band of five people who play music, " Caesale says, "but that isn't their main purpose. They are counterforces to the mainstream society in SpudLand—an exaggeration of the world as we know it. Into that arena comes the Smart Patrol, pursued by Big Entertainment Company. The only way anyone can see or hear anything in SpudLand is to sign with Big Entertainment, but the Smart Patrol does not choose to sign with them. They dump their songs and messages onto the BE net.

"When the player enters SpudLand, their friends at LifeForms Unlimited had created a cure. But during one of the experiments at the LifeForms lab, Turkey Monkey is created. ..." and then, well, play the game.



All the songs in **The Smart Patrol** are written and performed by Devo. The featured song, "That's what he said," is performed in a virtual club. Devo also appears in the Golden Oasis Retirement home, aged wheelchair confined ex-musicians, playing a never-before-released song.

the Pope Blesses CD-ROM

Pope John Paul II will visit the U.S. this fall, and Jasmine Multimedia is making a two-disc CD-ROM program to commemorate the event.

Inside the Vatican, based on WNET TV's six-hour TV series, traces the history of the church, views hundreds of paintings and artifacts and interviews historical figures. The program takes users through Israel, Turkey and Italy, and actors re-create pivotal moments from St. Peter to present day.



Bob Dylan Goes Interactive



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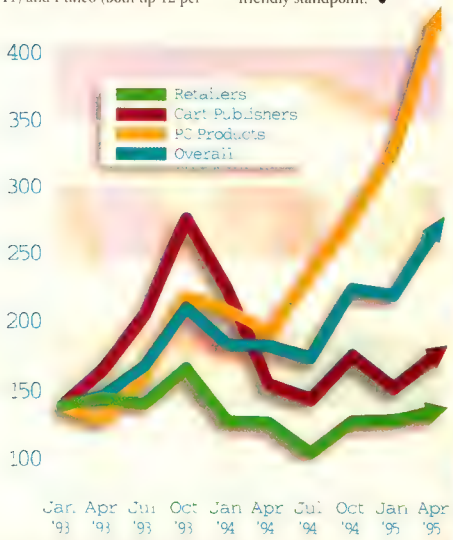
....FUSION STOCK MONITOR

Stock prices in the home interactive electronics business were soft overall, as investors secured their profits or moved seasonally sensitive money. The *Fusion* index declined almost ¯ percent in the month, mostly because of weakness in the PC-related stocks, which as a group were down 15 percent, the first negative monthly comparison all year. Share prices of the cartridge publishers rose almost 13 percent, while the retailers appreciated percent.

May was a month full of news —about E^3, new platforms, new alliances. Many month-end stock prices reflected such. The leading gainers were Acclaim and Electronic Arts (up 14 percent and 12 percent respectively), companies that Wall Street views as likely market share leaders for new game platforms this fall. Retailers also posted respectable increases, especially NeoStar (one of three retailers to begin selling the Sega Saturn on May 11) and Funco (both up 12 percent. Computer retailers CompUSA and Egghead were also up (5.5 percent and 7.9 percent respectively), as consumer interest in computers remained strong.

Shares of America Online dropped 23 percent after rising dramatically all year. All PC publishers lost ground. Sierra On-Line was down 4 percent; Spectrum HoloByte was off 8 percent; Broderbund dropped 9 percent and Creative Tech fell 21 percent.

"We're going to see a resurgence of interest in the video game system," Fairfield Research market analyst Gary Gablehouse believes. "Nothing like the cartridge industry realized in its first four or five years, but probably acceptable growth. A recurring thing that we see is that computers are still hard to use. If you're looking for immediate gratification and/or entertainment or reference, a plug-and-play system is still superior from a user-friendly standpoint." ●



FUSION Stock Monitor compiled by John Taylor, an interactive entertainment industry analyst with Portland, OR-based Arcadia Investment Corporation.

Yahoo Internet Service Gets New Look...

conFusion

Software Publishers Association Sept. 26-20, 1995, Boston, MA; Contact Nadia Kader at (202) 452-1600 Ext. 339; Fax (202) 785-3649; e-mail Internet: nkader@spa.org. Trade Only.

PC Home Expo Sept. 28-Oct.1, 1995, Jacob K. Javits Convention Center, New York, NY; Contact the Blenheim Group, Annie Scully at (201) 346-1400 Ext. 145. Public.

EGM Super Tour August 11-13, 1995, Valleo Fashion Park in San Francisco, CA; Sept. 1-3, 1995, Mall of America in Minneapolis, MN; Sept. 16-17, 1995, Sawgrass Mills in Miami, FL.

Winter Consumer Electronics Show Jan. 5-8, 1996, Las Vegas Convention Center, Las Vegas, NV; Contact Electronic Industries Assn. at (703) 907-7600. Trade Only.

Summer Consumer Electronics Show May 23-25, 1996, Orlando Convention Center, Orlando, FL; Contact Electronic Industries Assn. at (703) 907-7600 Trade Only.

Comdex/Canada July 12-14, 1995, Metro Toronto Convention Centre, Toronto, Ontario, Canada; Contact the Interface Group at (617) 449-6600. Trade Only.

Windows World at Comdex/Canada July 12-14, 1995, Metro Toronto Convention Centre, Toronto, Ontario, Canada; Contact the Interface group at (617) 449-6600. Trade Only.

Lan Expo at Comdex/Canada July 12-14, 1995, Metro Toronto Convention Centre, Toronto, Ontario, Canada; Contact the Interface Group at (617) 449-6600. Trade Only.

Bits, Bytes and Buzz

Byron Preiss Multimedia will co-publish CD-ROMs based on Penguin books, starting with John Steinbeck's **Of Mice And Men**, scheduled for September....**BlueSky Software** will develop sports games for the PlayStation and Sega Saturn for Data East. Baseball and football games for 32-Bit platforms are in the works....**Metro-Goldwyn-Mayer** will produce six to 10 CD-ROMs per year. The company plans PC and console titles, as well as multiplayer online games, based on film and TV releases and on original concepts. ...**Star Trek** guru Rick Berman is currently helping to develop a Las Vegas Star Trek theme park, planning to open its doors next year at the Las Vegas Hilton ...**ABC/EA Home Software** (a joint venture between Electronic Arts and Capital Cities/ABC) took a new name. Creative Wonders will publish educational, family reference and children's entertainment CD-ROMs, including all titles previously released by EA Kids. ...**Sega** used **Duck**'s True-Motion Video to develop the sampler disk included with the Sega Saturn. Duck's system provides software-enabled, full-screen, TV-style graphics. ...**Christopher Lloyd** will star as a video game villain brought to life, this fall on UPN's *Deadly Games*. ...**Netscape** has filed a registration statement proposing an initial public offering of 3,500,000 shares of Common Stock ...**GameTek**'s founder, Irwin Schwartz, retired as an officer when Bill Britt doubled his ownership in the company. GameTek lost money for the last two quarters, but Britt's generous additional investment will finance GameTek's development of advanced system products.

Starwave Heading For A Big Bang

BY BARRY FRIEDMAN

It's not easy to track Paul Allen. The Microsoft cofounder has been on a spending spree. Here are his key 1995 moves:

Jan. 1: World Wide Web move. Starwave de-emphasizes AT&T's Interchange Online Network in favor of the Web.

Jan. 10: Children's multimedia buy. Allen's investment group gives financial support to Storyopolis, which will produce film, television and multimedia versions of children's stories.

Jan. 16: Asymetrix staff cuts. Multimedia authoring software developer Asymetrix Corp. will sell its non-core products and reduce its workforce by 36 percent.

Jan. 25: Ticketmaster multimedia magazine. The unnamed entertainment title will cover everything amusement-related.

Feb. 27: Medio site Medio Multimedia Inc. establishes Internet access company in Seattle; will go nationwide.

Mar. 2: Outside Online opening. The outdoor sports net debuts at the Great Outdoor Adventure Fair in San Francisco.

Mar. 9: Telescan's Home & Design Online project will design and operate the Home & Design Online network.

Mar. 10: ESPN joint venture. Starwave partners with ESPN for a sports service on the World Wide Web and the Microsoft Network.

Mar. 20: Invests in Dreamworks. Allen becomes the biggest outside investor in DreamWorks SKG.

Mar. 21: cinet arrives. A computer network startup cable venture devoted to computers and online services announces an April 1 start date.

Apr. 4: Telescan launches financial service, a financial news and stock market quote service on the WWW Investor's Platform.

Apr. 7: Precision Instruments investment. Allen pays $5 million for 10 percent of Precision Systems Inc.

Apr. 14: Ticketmasters, MTV accord. Allen's Ticketmaster Corp. and MTV will sell concert tickets and merchandise directly to viewers.

April 16: Video Tools marketed. Apple Computer Inc. and Asymetrix Corp. release two new products that add images or video to multimedia presentations.

Apr. 24: 3D/Eye participation. It develops 3-D rendering and animation software.

Apr. 24: Family-oriented net service. Starwave Corp is creating a family-oriented Internet service for near-future launch.

May 1: Web entertainment magazine. Starwave Corp. starts *Mr. Showbiz*, an online-only WWW entertainment magazine.

May 8: Interactive TV service. *Mr. Showbiz* combines the elements of daily entertainment news updates, weekly features, movie reviews, lots of good celebrity gossip, and humor pieces with unique elements, including a unique daily serial novel.



May 14: Medio Multimedia unveils MedioNet ITV, an interactive television service it developed with Microsoft and Seattle-area media partners.

May 23: Sun Microsystems unwrapped its next-generation HotJava Internet World Wide Web browser.

May 30: Starwave CD-ROM teams with musician Sting and A&M Records on interactive CD-ROMs for late 1994 release.

No question, Paul Allen has a broad-based investment strategy. I believe that Paul is investing in items he personally enjoys, and that the moves are intensely synergistic. Paul Allen is supporting new technology, wants to be an Internet provider and supply information on sports, outdoor activities, children and music. It's also clear that Allen is not wedded to wires. His investment is in wireless delivery.

Paul Allen is spreading his wealth wide through the interactive marketplace. Expect more moves during the rest of 1995 and beyond.

Barry Friedman
president, International Computer Group
myriver@aol.com

Music for the Masses

Rap, Rock and Metal Musicians Shake the Internet

EVERYBODY MUST GET STONED!

Rolling Stones Website (http://www.stones.com) affords netsurfers a glimpse into the heart of the phenomenon that is the Rolling Stones. Fans can find tour dates, set lists and back-and-front-stage video taken at concerts. Audio clips let listeners hear bits of songs off the new *Voodoo Lounge* album. There's also large (up to 14-Meg QuickTime video interviews with Mick, Keef and the other Stones.

In the Voodoo Lounge, visitors can leave questions for the band members, and read their answers to fans' most obscure Stones' trivia questions.

After perusing a gallery of snapshots taken by guitarist Ron Wood (including the obligatory moon-shot) on the tour, one can start or add to a "Rolling Stones Fiction" story. Among stories launched by Keith Richards and (ex-Pink Floyd founder) Syd Barret, was *Cocksucker Blues at Robert Frank's House*, started by Mick Jagger. It begins with "The Royal Mounties knocked on Robert's front door, armed with seven different search warrants. Being occupied in the shower by his new girlfriend Gina, the rapping at the door went unnoticed." He's Mick; we'll have to forgive him.

Of course, not every visitor to the site is a Stones fan; one of the guest-created stories is titled *What Was it Like When Dinosaurs Roamed the Earth?* What a drag it is, getting old. ●







I WANT MY MTV!

The MTV Homepage (http://www.mtv.com) is a site to MTV's Beach House, where MTV carries on a house party all summer long. Still under construction, the site offers a description of the House and some of the on-line events (celebrities on-line, etc.,) that will be taking place throughout the summer once the site is fully expanded.



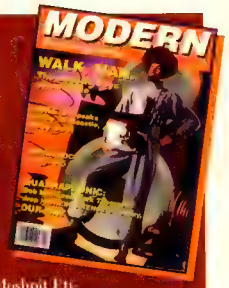
TOURIST TRAP!

Megadeath, Arizona (http://www.bazaar.com/megadeath) was one of the places Pee Wee Herman traveled to in *Pee Wee's Big Adventure* that was unfortunately cut out due to the film's original excessive 8-hour length. Well, *probably*, leastways.

When metal something-somethings Megadeath recorded their new album *Youthanasia*, they set up a recording studio on the outskirts of Phoenix, Ariz. This site was created to celebrate this glorious event.

Entering the visitor's bureau gives users access to the whole "town." Available for your perusal are the necessary tour date updates, a comics page, sound clips from the new album, video clips, video interviews, freeware, Megadeath e-mail postcards, "screen saviors" and a band biography titled *Godzilla versus Megadeath*, written by *Dark Rivers of the Heart* scribe Dean Koontz.

LICENSED TO ILL!



Beastie Boys—Grand Royal(http://www.nando.net/music/gm/GrandRoyal) Enter ... The Living Room! By clicking on different pieces of furniture in a *smoothly* decorated '70s living room, users can access *Modern Quadraphonic* the Beastie Boys' tour zine, a discography, a frequently asked questions list about the band, a reprint of the Mosh pit Etiquette poster (originally seen in the magazine of the Lollapalooza '94 Tour), a text piece by Mike D on the fifth Beastie Boy: Billy Joel and find out the lowdown on the Beasties' own independent record label (which houses such talents as Luscious Jackson). As you'd expect—tour date listings, sound clips, video clips and interviews are present as well.



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By JOHN WESLEY HARDIN

Incoming

Corporate combatants are lining up to sell you a piece of the broadband pie.

There is a battle on for the heart, soul and pocketbook of North America. On one edge of a shallow, cable-lined trench stand the massed might of the telephone companies, armed with cash and a huge, saturated infrastructure.

On the other side, the cable companies hold their ground with large numbers of installed high-speed systems and experience in delivering entertainment programming.

Both have access to technology that will radically change the entertainment and telecommunication landscape.

In the background, out of the direct line of fire, partisans and big players make alliances and structure joint ventures.

They all want to sell you the future, and they want to do it now.

What kind of future do they have in mind? It looks something like this: A single line into a private home provides a high-speed Internet link, access to thousands of TV programs and movies, interactive games against other subscribers, some community services and 10,000 flavors of home shopping. This range of services is loosely termed broadband.

What "broadband" means, in this sense, is sound and video broadcasting. Because there is more information in audio/video transmission, it takes more bandwidth to send out. Under this definition, radio and telecommunications are narrowband, TV is broadband and cable television even wider.

But in the face of the coming revolution, broadband means everything from video phones to video-on-demand. When the final pieces of the required high-speed networks are together, the future according to AT&T will be here.

Not only will you be able to do the convenient-but-boring stuff like renew your driver's license at a cash machine, but, eventually, your TV will replace your computer, your telephone, your video game system and your local first-run movie theater. And, even better, you can sit in the comfort of your own home and renew your license.

That kind of service is still theoretical. Right now, the future is composed largely of sports trivia games and home shopping.

That's because creators and owners of content are only now being added to the mix of wanna-be broadband providers, who have been concentrating on getting the technology in place to the customer.

For the bigger players, programming is less of a problem. It's only a matter of time before subscribers to Time Warner and Viacom's respective services have video-on-demand access to the huge libraries of media that each company owns. Cable companies are also exploring ways to put libraries of CD-ROM programs online, for subscribers to download.



Gary Arlen

Video-on-demand, programming viewed when the customer requests it, is going to be an integral part of this new information medium. "There is no 500-channel cable in the future. There's only one channel, and that's whatever you want to see," says **Gary Arlen,** industry analyst and president of Arlen Consulting, Bethesda, MA.

Soon a night around the TV will be a custom-programmed event, where family members choose everything they watch from a menu of films, TV shows, services and pay-per-view events. Video-on-demand from local cable providers will be most people's first encounter with broadband-type services, unless they happen to live in one of the interactive TV test markets around the country.

What will it really take before we all have access?

Speed.

Faster data transmission is *the* key. Right now the industry is seeing the synthesis of several emerging technologies that promise to drive baud rates up to bit-scorching speeds. Standard modems now transmit at 14,400 baud per second, while the fastest ones transmit at 28,800. Integrated Services Digital Network lines operate at a basic speed of around 56,000 baud, and primary lines can be configured to run at around 1 *million* baud. Regular television program-

Will broadband replace the Internet?

Don Daglow, StormFront:

"The problem that exists with broadband right now is that the people who have created it did so with video on demand in mind. They may have had much loftier goals, but they made sure they got that part right.

"Depending upon the system, the suitability of the system for true interactive, socially-based multiplayer games varies from very, very low to some potential, but these systems have not tended to have extraordinary potential for that because they are so focused on that video delivery paradigm. I think for them to threaten the traditional networks in terms of social interaction games, they will have to have a better back channel, a better way to get more about the user, the user's wants, and needs back into the system instead of just having the user able to navigate through the system

"That's what the current networks have that broadband providers do not. Since broadband can deliver far superior graphics and sound, they have this wonderful advantage. The trouble is, it's like having a wonderful mouth but tiny little primodial ears. Without the ears, it's difficult to learn how to speak. For broadband to speak to gamers, it needs more ears, which are the back channel.

"That's why the networks are going to remain a better multiplayer game forum for probably a significant hunk of the future until that issue gets solved. Once it is solved, then the whole world changes."

Tom Waldrup, Intel Spokesman:

"No, it will compliment the Internet and make the Internet even more attractive. The way it would work is that a cable company or phone company that wanted to deliver high-speed data services to home users would offer connections to the Internet and to other available services, such as AOL, CompuServe, or any other services that might make sense: home shopping, home finance, education, infotainment, etc. But by using their own high-speed connection to the service, they provide a gateway to the Internet that is very attractive because it is so much faster."

Ron Beltramo, Atari spokesman:

"We're involved with Time Warner's cable. What I've seen and heard so far is that what people want on demand is music and videos, so that is a definite opportunity for broadband. If it's priced right, people are ready to take advantage of those services. But I don't see it as replacing the Internet in the immediate future.

"Yet the Internet is only a small group of people, mostly young. It doesn't reach the everyday person. It's convenient and neat to browse. But it's almost like information overload, not really entertainment. For the average consumer, it will take other avenues to reach them."

Martin Levine, Editor & Publisher of the Digital Technology Report:

"No. I think there's always going to be a place for the sense of community that the Internet provides and the type of functions that the Internet provides that don't need to be transported to a broadband environment.

"It may be that the Internet will be carried over to broadband networks, but even that will take years before the entire country and the entire world is wired for broadband networks. The Internet is here today."

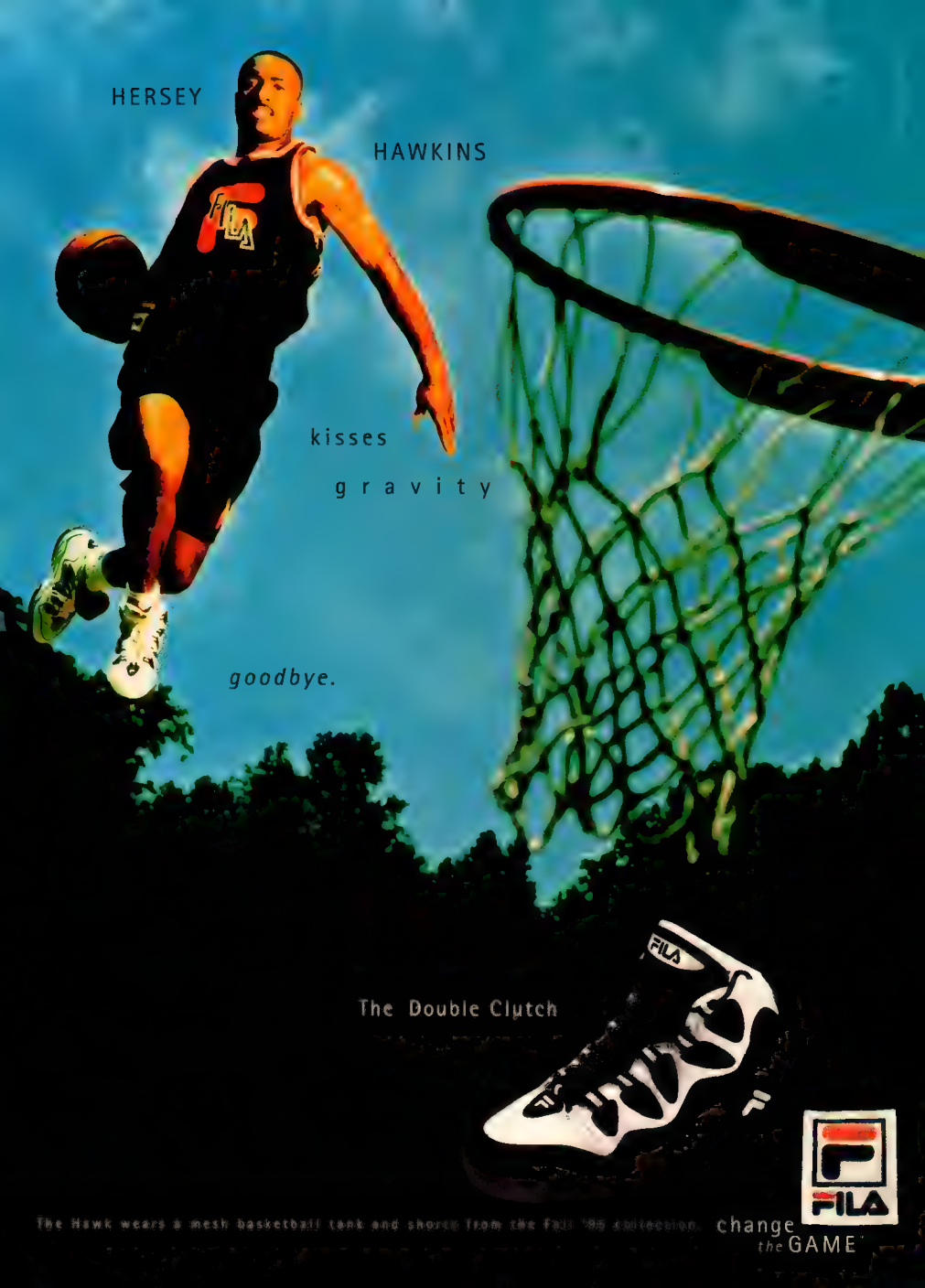
Robert Holmes, President of Acclaim:

"We do not feel that broadband will replace the Internet. The Internet is essentially a "free" network that provides a common marketplace for the exchange of information and ideas. Broadband, however, has the potential to address the speed and quality of the flow of network information, facilitating a broader array and higher quality of audio and visual entertainment and information than is possible on the Internet. We believe the two will coexist."

Lynn Tucker, of Interactive Marketing, Inc:

"The two are exclusive of each other, almost like radio versus movies. No, I don't think any vehicle would necessarily replace another one."

end


HERSEY
HAWKINS
kisses
gravity
goodbye.
The Double Clutch
FILA
FILA
The Hawk wears a mesh basketball tank and shorts from the Fall '96 collection.
change the GAME

ming feeds at 3 million bps, and the next generation of broadband servers operate in the 20-40 megabaud range. Whatever the content, these data speeds mean that sellers can put a lot of it into the home.

Getting information back from the user is a different story, however. For interactivity, broadcasters must provide a backchannel; a way for users to talk back to them. Right now, many of the ITV services use regular telephone lines as a backchannel, and a few cable companies have had some success in using cable lines for feedback.

These narrowband return lines are fine, so long as the info coming from the user is only a few button clicks and credit card numbers, but totally inadequate for actual live video interfacing, which is sort of the Holy Grail of interactive service providers



David Lockton

Achieving equitable backchannel speeds is necessary before luxuries like video phones become commonplace, but with ISDN (see sidebar), digital switching and asynchronous transfer mode communications, telcos and cablecos are ready to provide a new generation of services Well, almost ready.

One other maturing technology, fiber optics, is central to the delivery of the digital signals that broadband relies on. Cable and telephone companies are both working furiously to lay down as much fiber optic cable as fast as possible, but even optimistic estimates say that it'll be at least five long years before the whole country is wired.



In the meantime, compromise solutions like hybrid co-axial/fiber networks (networks that use fiber in the trunk lines and coaxial cable to the home), are delivering the goods in several interactive TV test trials, and fiber optics will probably become universal in the trunk lines of both cable and telephone companies within the next three years.

More than technological perils stand in the way of companies working in this volatile field. Insiders jokingly refer to interactive television as "the nations' fastest-growing zero-billion dollar industry."

broadband \brod-band\ n 1: sound and video broadcasting 2: there is more information in audio/video transmission, it takes more bandwith to send out 3: radio and telecommunications are narrowband, TV is broadband, and cable television is even more so

Playing the highway

Sega Channel takes cable to the next level

Sega Channel is counting on a premium service called Express Games to survive the impending retail death of the Genesis. Talks are also under way with Catapult that would turn it into a two-way broadband service.

So far, the shaky 16-Bit market hasn't affected the New York City-based operation. Since its January 1995 start, Sega Channel has signed up 250 cable companies with a total reach of over 7.2 million households. They're adding about 50 cable operators a month.

"We'd love to have a million subscribers by the end of the year," says Vice President Mike Shorrock. "My analysis is that this is the year, 1995, with the most active Genesis users of all time. In terms of riding the wave, we're right on the crest. The active user crest generally follows the retail crest by a year or so."

Sega Channel execs get cagey when asked about the current total, so it's hard to tell how close it is to inking that millionth customer. Estimates are that the service is less than halfway to its goal.

That's fine for 1995, but Sega Channel management is counting on staying viable for another three to four years.

This fall SC officials hope to postpone the inevitable decay of the subscriber base with a 32X-compatible adapter. In light of the 32X's weak market position, that would be like swimming with a cement life preserver.

Fortunately for its long-term health, Sega Channel isn't counting heavily on the 32X. "Our mandate is to program for the Genesis user," says Shorrock. "We would like to be a programmer in the true sense of the word. Imagine a role-playing game in which the player solves a group of puzzles and gets a password that allows them to continue the quest the next month.

"We want to give unique gaming experiences you can't get anywhere else." So far, Sega Channel has run special promotions with **Earthworm Jim** (Playmates) and **Triple Play Baseball** (Electronic Arts). After downloading a special version



That's probably not very funny to David Lockton. His company, Interactive Network Inc. (IN), pioneered the interactive TV industry with play-along sports games, and holds several important patents on technologies that will probably be in widespread use as broadband interactivity expands.

Last month, after nine years in business, IN shut down its five trial market tests and furloughed 160 employees in a last-minute attempt to secure more financing. IN's crucial backer, cable giant TCI, declined to invest more money in the company, and has formed a strategic partnership with Acclaim Entertainment to provide interactive content *(see **Prime Time Players** in this section)*.

Part of IN's, and everyone else's, problem is that nobody knows what is going to be available or who is going to want it. Market research has never shown a lot of interest in interactive TV, but companies are hedging their bets and seeking all the potential killer applications that will make it a must for the consumer.

This dilemma is stated succinctly in the final report of the Australian Broadband Services Expert Group "We face a complex set of . . economic and regulatory issues. Demand is uncertain, as are the precise nature of the technological and social impact of new communications. Yet we cannot turn our backs on the new networks."

Certainly, the telephone and cable providers can't afford to turn their backs, because they aren't the only ones on the field. While the two most established competitors fight to put the expensive fiber into the ground fastest, wireless broadband technology may leave them both behind.

Direct broadcast satellite systems are already transmitting hundreds of channels into an increasing number of viewers' homes around the country. While the satellites can transmit a lot of data, there's no backchannel, and hence no interactivity, but that apparently is not crucial to the million or so subscribers to DBS services nationwide. Cellular communications technology is also showing a lot of promise as a delivery system capable of carrying gigahertz of bandwidth without need for cable or wire.

of the game via satellite on Jan. 25, subscribers competed in the Earthworm Jim Race. The first person to finish all five levels won a trip to meet David Perry.

The June Triple Play event also involved a special version of the then-unreleased title. Users played three innings, got a password and dialed a number to become eligible for a trip to Cooperstown. The participation rate on the Earthworm Jim Race was 25 percent, so Sega Channel will be doing a lot more interactive promos.

Normally, Sega Channel premieres a game three to six months after its retail debut. To smash that outdated window, Sega Channel introduced Express Games in July. It puts games on the cable on the day and date of their retail introduction. This procedure is sure to satisfy anxious game enthusiasts

Express Games is a rental service. Subscribers pay $3 for two days. That's a little higher than some retail rental outlets, but Sega feels that convenience and the elimination of availability delays will make Express Games viable.



Batman & Robin (Sega) kicked things off in July, and three to five premieres are promised for this month. **Primal Rage** is locked in for September

The Catapult negotiations could give Sega Channel a rocket boost. The technology under discussion would allow interactive play through Sega Channel by any two subscribers. The lure of head-to-head competition is probably what's needed to hold most users past January 1997.

Is there life on the Next Level?

Sega Channel's immediate objectives are clear and obvious, but its ability to change long-term strategy is jeopardized by the death from cancer of Stan Thomas last spring. He lived to see the startup, but the "Great Helmsman," as some of his lieutenants called him, won't be around to steer Sega Channel through turbulent competitive waters.

For now, the executive team Thomas built runs Sega Channel under the supervision of its board. Some tough programming decisions and technological decisions loom on the horizon. Whether Sega Channel stays on the wave crest or founders in choppy surf will depend on its ability to make a transition from the outmoded Genesis to a more powerful platform with a prospective life span that stretches to the millennium.

end

"All of this is very interesting," says Gary Arlen, "but not critical to the end user. They don't care about how it gets into their home, they want to know what form the programming is going to take, how much they're going to pay for it and what boxes they have to connect to it."

Unfortunately, these are the questions that remain *after* the basic delivery questions are answered. Time Warner Cables' Full Service Network trial in Orlando, Fla., provides a prototypical example of interactive TV, but there is still too much that is uncertain about the technology, markets and content of broadband entertainment to be able to predict who the future belongs to.

So when is the future going to be here? Since it's anybody's guess, here are a few of our own predictions:

Widespread video-on-demand: 1996. Tests are being conducted, and many hotels around the nation have VOD systems up and running.

Widespread ISDN: 1997. The Baby Bells are working furiously to get this technology into place, and Pacific Bell has most of California wired. Many countries around the world already have more advanced ISDN systems than the U.S.

Networked gaming over cable: 1995. The Sega Channel (see related story) is available now in many places, and Scientific Atlanta just shipped 300 more Sega Channel server systems to cable providers around the country.

Cable television access to the Internet: 1997. Intel is experimenting with this, and predictions peg the synthesis of net surfing and channel surfing by the year 1997.

Video Telephones: 1998. Forms of this are available now, but reliable, real-time video telecommunications should become much more common after ISDN networks are in place.

Widespread interactive television: 1999. Predicting who will get to the market first is impossible, but some form of interactive TV should be commonplace by the end of the century.

Integration of all these technologies into one, true, broadband, interactive medium that replaces TVs, computers and telephones: ? No real way to guess, but it's the logical extension of the current trends.

No one can say when, but everyone agrees that it will be here. Gary Arlen: "It's a very big, complicated process. Some services will be available in two to three years, but universal access is probably still 10 to 15 years away."

In that case, remember to set your VCR. The revolution *will* be televised.

end

Integrated Services Digital Network

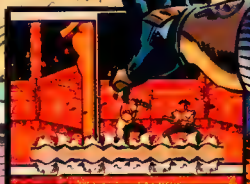
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By JOHN WESLEY HARDIN

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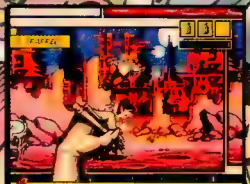
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end

On The Technological Edge

By JOHN WESLEY HARDIN

Don't ignore the business behind the static curtain

When it fulfills its promise, broadband entertainment will be to TV what broadcast television was to radio. Eventually, it will change every aspect of how we communicate with others and entertain ourselves.

Important questions remain to be asked about non-commercial and public service applications of this evolving technology. It's assured that education, health care and other social issues will follow us into cyberspace. Whether they can be more effectively addressed remains to be seen.

So far, few groups have appeared that exclusively champion the concerns of the end user. That's probably because, until recently, there haven't been any end users. There is no fear that the basic needs of the end user will be overlooked by companies hoping to be part of what is estimated to be a $3 5 *trillion* market by the next decade.

Many of the decisions made by commercial forums will have far- and wide-reaching impact on the type and variety of services finally delivered to the customer in the end. One such forum is the Partners in Open Wideband Entertainment Resources (POWER) Alliance.



The POWER Alliance is a consortium of companies dedicated to preventing the kind of mess that has been made of standards and compatibility in the computer industry. According to Jeana Toney, the group's acting chairwoman, "The POWER Alliance should make the interactive TV market comprehensible and accessible to customers." Organized by PowerTV, the alliance will lobby for support of PowerTV's open-architecture, interactive TV operating system. They plan to set compatibility guidelines and standards, specifically support for 3-D graphic interfaces and the MPEG movie format.

"Open standards for software development are especially important, because consumers care little about boxes—they care about applications and programs," says Alexandre Balkanski, chief operating officer of C-Cube Microsystems. "To develop the interactive television industry, we must make it as easy as possible for artists, authors and programmers to create interesting, entertaining, informative and educational software and video programs."

The fact that PowerTV started this group would seem self-serving if their operating system had not already been given ringing endorsements. Influential hardware manufacturer Scientific-Atlanta selected the PowerTV operating system for their next

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generation of digital set-top boxes. According to Michael Harney, VP of engineering for Scientific Atlanta's Subscriber Systems division, "The PowerTV system is the industry's foremost operating system for digital television and we believe it is the only viable choice for interactive TV vendors and developers."


Michael Harney

Membership in POWER is open to interested companies. Their web site, open to all, contains information about members, technical resources and web sites of interest to ITV developers (http://www.power_alliance.org).

Just because companies are lining up behind PowerTV's software doesn't mean there isn't stiff competition. Just as operating systems like Windows and Macintosh compete in computerdom, no single interface will rule interactive TV in the near future.

Long-distance behemoth AT&T and BroadBand Technologies, manufacturer of telephone network software, announced their joint project, the SLC-2000 Access System, a full-service network operating platform that will integrate telephone, high-speed data and digital video services.

General Instruments, another seemingly ubiquitous player, is the largest manufacturer of cable TV set-top units in the world, with multiple fingers in other parts of the wideband pie. Two years ago, Microsoft Corp. agreed to provide the operating software for a new generation of General Instrument boxes. Troubled by "setbacks" in the design of the software, Microsoft's system is still not finished, a full year *after* the planned rollout of the hardware.

In May, GI signed an agreement with software platform builder Microware Systems to use Microware's DAVID, an open-architecture operating system, in 4 million of General Instrument's new digital set-top consoles. DAVID supports multiple development tools, video servers and transmission systems.

With this move, Microware could set a standard for ITV operating systems.

To make interfaces and, it is to be hoped, entertaining programming for interactive television, creators need development systems. Development systems for high-end video-gaming platforms like the Sony PlayStation or Sega Saturn cost hundreds of thousands of dollars. The cost of development tools for interactive television ranges up into the millions.

So far, only one system is within reach of the average company. nVision is a development system from supercomputer maker nCUBE and Apple Computers that lets designers use Apple's QuickDraw and QuickTime technologies to create programming. The system's relative low price (around $230,000) will allow small developers access to technology that is normally only available to large corporations. Robert Goldberg, VP of marketing for nCUBE: "nVision offers developers the ability to simulate large-scale multimedia trials at a fraction of the price of a high-end ITV system."

One group formed in the public interest is the ATM (Asynchronous Transfer Mode) Forum. ATM is a packet-switching technology (similar to, but faster than, cellular phone transmissions) that allows different types of data to be transmitted at high speeds on the same line. The Forum's charter is to hasten the development and deployment of ATM products and services to consumers and small business owners, while promoting industry cooperation. There are now over 700 members in the Forum, software giant Microsoft among the more notable. The ATM Forum is online at http://www.atmforum.com/.

Another place to find basic info about broadband technology on the web is at San Diego State University, at http://buzzer.sdsu/atm.htm.

There's really no need to learn how high-speed networks deliver service to the home; the important question for most of us is, "What will it bring when it gets here?" Broadband technology is a commodity designed to be sold to millions of people. It's safe to say that, at first anyway, interactive TV will be like cable TV, only more so.

As the Internet is transformed by the same or similar technologies as television, Internet service will become part of the package sold by ITV providers. Will this synthesis create a wired world where the Internet is as widespread as telephone service, or will the Internet be turned into some sort of broadband, public-access ghetto for the disenfranchised? As the technological questions are answered, it becomes clear that the hardest questions have not yet been asked.

end

The U.S. West Test

"Mutual" TV on trial in Omaha

The primary technical test for Telechoice is over and a consumer test of this interactive television service is about to begin in Omaha, Neb. US West, created by the Bell bust-up in the early 1980s, has a fiber-optic, coaxial hybrid network with a 50,000-home reach and is ready to start testing both one-way and interactive programming.

The company includes the three former Bell companies Northwestern Bell, Mountain Bell and Pacific Northwest Bell. It covers a 14-state territory west of the Mississippi and also has overseas interests in eastern Europe and the UK.

A recently announced stock plan divides the company's operations into US West Communications and US West Media. The former services the core telephone business, while the latter is ventures such as multimedia.

"We think broadband is a natural evolution of our business ," says US West spokesman Bob Kelley. "The ability to not only provide voice and data, but true interactive communication and video entertainment made it seem to be something we needed to be part of in the early stage or risk being left behind."

US West started working in broadband in 1991, following several years of research. Kelley credits. Tom Bystrzycki, executive vice president of operations and technology, as management's most persistent broadband advocate. "Within the company, he's identified as the visionary who committed the corporation to this project.

Bystrzycki's gamble is almost ready to start paying off. US West selected Omaha as the test site in 1992 and started construction of the network the following year. The trial, which began in 1994, also included "friendly households," families that signed up for cost-free subscriptions to the multimedia programming then available.

The fiber-coaxial net carries both video and telephonic services over separate transmission paths. The analog and digital video signals travel over fiber-optic conduits to neighborhood nodes, each of which serve approximately 400 homes. Signals travel down coaxial cables from each node to the individual homes.

(continued on page 40)


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Scientific Atlanta is manufacturing the set-top box. The 3DO Company provided a lot of the technology inside the case.

The pricing structure, awaiting FCC approval at press time, is still up in the air. The FCC responded to the initial filing with a request for clarification of numerous points. Although this has delayed the start of the market test, an optimistic US West hopes to get started by the first of August but could be delayed for up to a year. The FCC questions are said to parallel the ones asked of Bell Atlantic concerning its forthcoming broadband test, relating mostly to cost issues.

US West picked Interface Communications to run the retail business. It has sole responsibility for setting the price to consumers, program selection and packaging of services. Since there are two other cable outfits available to west Omaha residents, the fees will be competitive.

The first available programming is analog-based. This is a more-or-less standard cable TV offering under the name Telechoice. Apart from a few stations not currently in the Omaha market, it is nothing unusual. Sega Channel is one of the offerings, though that service will expand capabilities as Telechoice adds digital offerings to the mix in late fall.

When digital service begins, Telechoice customers will be able to order movies on demand, play games interactively against other subscribers and shop at home.

Already announced games include Sega and 3DO's full catalogs of interactive software, NTN's QB! football simulation and interactive trivia games and multimedia entertainment.

"The importance of this project, the big picture, is that it starts to fulfill the promise of the information highway," Kelley declares. "All the other Telechoice services are good, but interactivity is the real story.

"No one is sure if the specific technology we're testing in Omaha will be the technology of the future," Kelley admits, "but there's going to be a full interactive convergence of entertainment, information and education—and that is exciting!"

end

Prime-Time Players

By JOHN WESLEY HARDIN

Meet the new boss; same as the old boss

Interactive TV and broadband entertainment are anticipated to become a $4 *trillion* annual market within 10 years, so it's no wonder that the biggest names in high-tech providers are involved. It takes heavy hitters like Time Warner and AT&T for the deep pockets needed to build networks, create content and deliver goods and services.

There are many ITV projects, but Time Warner Inc. leads the pack. Their Full Service Network is in operation in a limited area, and they are making plans to deliver the service to wider areas (see sidebar).

US West and NTN Communications will produce US West TeleChoice, an "enhanced video gateway service." NTN, provider of interactive TV service to bars, restaurants and other businesses nationwide, will supply programming, including **QB1**, an interactive football game where participants play along with live football broadcasts. Gamers compete against players across the continent. The service will eventually be available to 45,000 homes in the trial area in Omaha, Neb.

Southern New England Telephone (SNET) will offer video and interactive services over telephone lines, to about 150,000 homes in Connecticut by the end of the year. SNET Personal Vision, distributed over SNET's hybrid fiber/co-axial network, has 45 channels of basic and premium cable programming. Enhanced pay-per-view channels play movies more often than regular programming, much to the delight of all the home cinemaniacs. The Personal Vision video-on-demand library contains around 1,600 movies, special-interest programs, news and special events to be ordered via television remote control

SNET, the final company in the country to successfully appeal the Cable Act of 1984, will introduce interactive TV service in 1996 or '97 in Connecticut. The U.S. District Court in Connecticut lifted the rule that prohibited cable TV providers from providing programming in their own service areas. SNET spokesperson Beverly Levy: "Now, we can learn what our customers want and fill any gaps in our service with appropriate programming, no matter what the demand."

Tele-Communications Inc. (TCI, the largest cable operator in the United States, was the first to carry the groundbreaking Sega Channel. The former backer of the now-dissolute Interactive Network is branching out into related areas.

A joint venture between TCI and Acclaim will distribute, develop and acquire entertainment software for all interactive electronic media and promote a new standard network game platform to be incorporated into TCI cable service



set-top boxes. The Glen Cove, NY-based project is headed up by MTV and Nickelodeon media-whiz John A. Lack.

TCI joined with a Silicon Valley venture capital firm to form @home to offer high-speed Internet access through existing home cable systems. Since cable modems work over 1,000 times faster than telephone modems, @home could start an Internet revolution. Roman Ormandy, president of Caligari corporation, was effusive about the potential for the technology. "If consumers can connect worldwide at these speeds, they can create new ways to run businesses, educate themselves and so forth. New opportunities are just waiting to explode." Caligari makes trueSpace 3D modeling and rendering software.



Pioneer New Media, Home Interactive Television, Inc. (HITv) and Coaxial Communications will bring national and local information services, impulse pay-per-view, an interactive program guide, interactive games, shopping and other services. Pioneer manufactures the stand-alone units, HITv provides software and Coaxial will distribute the service when it debuts this fall in Columbus, Ohio. HITv Interactive uses a telephone backchannel to download new functions and change existing applications.

General Instruments, parent company of the Sega Channel, recently moved to provide true interactivity on the Sega Channel. GI will incorporate Catapult's XBAND technology into their Sega Channel adapters, so customers can play head to head, compete in tournaments, see rankings and stats of other players, and send e-mail over the Internet. The Sega Channel delivers around 60 video games a month to about 30 markets around the country, with more to come

Oracle and Hewlett Packard will deliver interactive TV service to a test market in San Jose, Calif., including video-on-demand. Pacific Telesis will provide the service throughout Southern California.

Oracle partnered with Intel to create home-interactive video based on personal computers. The technology uses existing telephone circuitry to deliver video e-mail, news on demand and other services.

GTE and Creative Multimedia formed a partnership to bring CD-ROM entertainment products to 4000 GTE Mainstreet subscribers in Massachusetts and California. Initially, customers can download multimedia murder mysteries created by Creative, including **Who Killed Sam Rupert?** and **Who Killed Elspeth Haskard?**

It's really only a matter of time, hopefully not too much time, before the future comes right to your curb.

end

Time Warner Cable's Full Service Network

The nation's most well-publicized interactive TV service came online in January, in Orlando, Fla., with just over 4,000 subscribers.

Subscribers to the FSN have access to the Carousel Navigator, a 3-D graphic interface, 62 movies on demand, interactive shopping (in a 3-D virtual mall) from a variety of merchants including Spiegel, Williams-Sonoma, The Nature Company, Warner Bros. Studio Store and the U.S. Postal Service. Atari Jaguar games are available to play on the unit included with the subscription. There is a network playable action/strategy game called Pods, interactive Gin and solitaire Klondike. Customers follow broadcast and cable schedules with an interactive program guide.

The future should bring more movies, news and HBO on demand, additional merchants and a Magic Music Mall for music products. Eventually there will be connections to public libraries and schools, as well as banking, classified ads, travel, food delivery, long-distance and local telephone service.

With so many venues available to the subscriber, it will be interesting to track the societal effects of such a service.

A rundown of the major companies involved illustrates the scale of the operation: Time Warner, US West, Toshiba, and ITOCHU Corporation (the world's largest trading group) were the major investors. AT&T provided the first commercially available ATM switch, Hewlett Packard provided the color printer to homes, Hitachi manufactured the demultiplexer that controls information to and from the home, Silicon Graphics built the servers and MIPS chip for the home communications terminal, Scientific-Atlanta integrated the home communications terminal/advanced cable box with Silicon Graphics, built the head-end and distribution electronics, digital modulation equipment, amplifiers, laser transmitters and the optical receivers in neighborhood nodes. That's the hardware. Eight companies collaborated on the software, including Silicon Graphics, who designed the Carousel Navigator, and Time Warner Interactive, who gave input on entertainment applications.

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Silicon Valley has its legends. Jobs and Wozniak became mythic when they invented a new computer in a garage and called it an "Apple." Trip Hawkins' epic began when he left Apple to form one of the most successful game companies of all time, Electronic Arts.

Like most societies, Silicon Valley has its own story of creation. It concerns Nolan Bushnell and a little game he invented called Pong.




THRICE!
BY STEVEN C. KENT

As an undergraduate at the University of Utah, Nolan Bushnell defined the unique philosophy that would both charm and jinx his life. "As a freshman in college, I wrote a theme paper stating that the way to have an interesting life is to stay on the steep part of the learning curve.

"I reasoned that a bright person should be able to fundamentally master almost any discipline in about three years. When I say mastery, I mean hit about the 90th percentile. You can spend the rest of your life trying to move up that last 10 percent.

"I want to be constantly on that 90 percentage curve, which means I have to change venues often. That's why I went from games, to restaurants, to toys, to robotics, to venture capital, to networking to telephones.

"And once I reach that mastery, I lose interest. I was an avid sailor. I decided that I was going to make an assault on the Transpac [an international yacht race], which I won. I went home, and I don't think I've been on a sailboat three times since then.

"Been there, seen it, done it."

The Can't Lose Years

In 1970, Nolan Bushnell converted his daughter's bedroom into a workshop. He made more than just the first arcade video game in that room, he created an entire industry.

Nolan Bushnell did not invent the first computer game. While in college, he played **Spacewar**, a very early computer game. The University of Utah was one of only four schools that had a computer with a screen (actually a teletype). In the early '60s most computers simply printed their read out.

Bushnell did not invent the first coin-operated game machines either. It may surprise many people to know that before video games, there were coin-operated racing games and flight simulations.

"I think the original games were mechanical tours de force. They were so clever in what they were able to do with compositing. Some of those old machines were basically dynamic slide projectors.

"One of my favorite games was **Speedway**, by Chicago Coin. You controlled the projected image of a race car that was composited on a track with other cars. If you collided with another car, the game showed a projected image of your car wiping out."

While in school, Bushnell was very familiar with these games. He managed the game department at Lagoon, a popular amusement park just outside of Salt Lake City. "It was a significant portion of my education," says Bushnell.

After graduating from the University of Utah and moving to California, Bushnell combined his education in arcade games with his formal training in engineering. He constructed a workshop in his daughter's bedroom and created **Computer Space**, the first coin-operated arcade game. According to Bushnell, the game sold somewhere in the neighborhood of 2,000 units

"I cut corners as much as possible when I made **Computer Space**. The quarters dumped into a gas can. This was before there was an industry that made parts. As a little company, if you wanted to do this, you had to find ways to do it yourself. We modified televisions for three years before there was a monitor manufacturer." **Computer Space** was the last game he ever created with his own hands.

Bushnell formed his own company, Atari, and set out to create "the easiest game imaginable." "**Pong** was a knock out of the ball park. We sold 50,000 units."

Once he founded Atari, Bushnell found himself in a new role—business manager "It seemed like on the business side, I was the only one to do it. I could get other people to do the engineering."

Bushnell is uncomfortable taking credit for creating the electronic gaming industry. "I enabled it. I was just the guy who set it up so that it would cost you a quarter."

Atari grew more quickly than anyone could have dreamed It became more than a company, it became the genesis of an entire industry. Steve Jobs, co-founder of Apple Computers, was an early employee of Atari Sid Meier and "Wild Bill" Stealey decided to form MicroProse while playing **Red Baron**, an Atari game Backed up by a

RISK MANAGEMENT





young and unbridled group of creatives, Bushnell successfully made Atari a worldwide organization.

It is as a manager that Bushnell receives the most criticism. Writers have accused Bushnell of creating empires and then mismanaging them to ruin. In 1976, he sold his very prosperous four-year-old company to Time Inc. for $28 million and remained on for two years as chairman, a relationship that ended less than amicably.

Whether it was his own personal muse or just lightning striking again, Bushnell's next venture was another grand-slam success. He combined several popular trends into one venture—Chuck E. Cheese Pizza Time Theater. Where else could you go to combine pizza, video games and robotic entertainment? Pizza Time Theaters became a national chain, and each location filled in as a neighborhood Disneyland.

By the early '80s, Bushnell had hundreds of Chuck E. Cheese restaurants across the country. Driven by that personal angst that keeps him looking for new challenges, Bushnell left control of Pizza Time Theaters to his employees as he conquered other worlds, including investing in new technologies and competing in yacht races. Though it would be quite unfair to say that Bushnell ran Chuck E. Cheese into the ground, he can be accused of flagrantly ignoring the unique restaurants.

It was during this glorious time that Nolan Bushnell's personal muse seems to have abandoned him. Without Bushnell at the reigns, Chuck E. Cheese skidded into Chapter 11 bankruptcy. None of his other ventures panned out as he had expected, and Bushnell was suddenly faced with a new found fallibility.

E2000—The Comeback

After 15 years, Nolan Bushnell has emerged to try his hand in an industry that bears little resemblance to the video game industry he left behind. His new venture, E2000, is halfway between Atari and Chuck E. Cheese—a virtual entertainment center with a high-tech restaurant, futuristic sports and network and video gaming rooms. "You might think that this is just a repeat of Chuck E. Cheese, but the objective is to be in your face. I think of this as my theatrical launch."

The heart of Bushnell's new venture will be a small 30-person Virtual Immersive Theater (VIT) that combines sight and sound to create a three-dimensional experience. "You notice that these are Immersive theaters, not interactive theaters. This is storytelling. I'm trying to move away from interactive this first year. I'm just creating an impactful environment."

"The screens are very dynamic and digitally composited. The floor under the theater is raised. We're using the cavity under the floor as the bass speaker and resonance chamber. It can lift the audience a quarter of an inch.

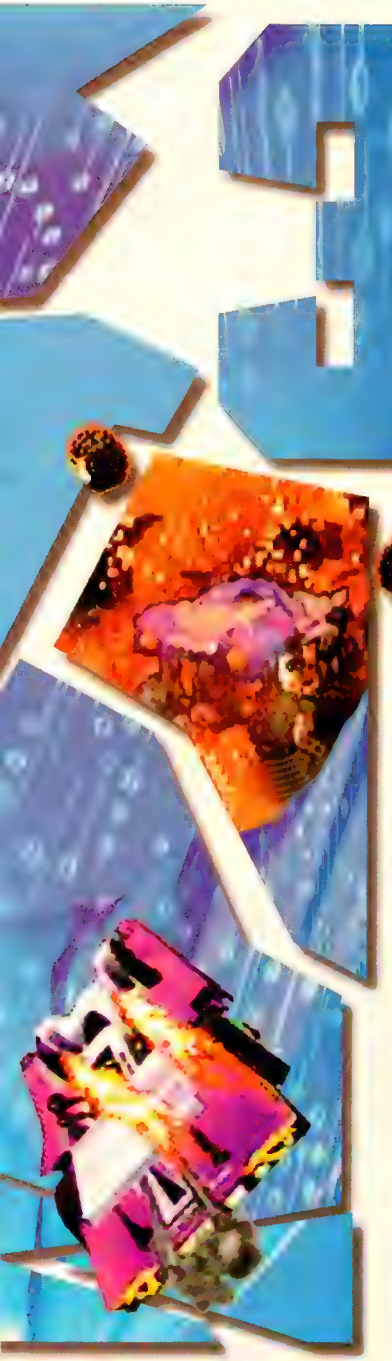
"When you have a small area, you can do things acoustically that are physically impossible in a larger area. You can do amazing things with the right acoustics. Basically, I'm going to be able to deal with people's eardrums in some new ways."

According to Bushnell, his labs have developed the illusion of expensive technology while cutting corners on cost. "In these theaters I've got points that I want you to concentrate on, the rest is just cheap shit."

Similarly, Bushnell's first immersive show will rely on high-tech wizardry. "This is one of those areas where you don't know how good is good enough. Production values cost money ... a lot of it."

Having been out of the industry for more than a decade, Bushnell has to prove that he can compete in the arena that he helped create. He's got a lot to prove. Many people associate him with the failures of Chuck E. Cheese and Atari and consider his career washed up. Bushnell sees it differently. He sees himself competing on an entirely new field. He's back on the steep part of the learning curve, and his life is again very interesting.

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8



3DO ON THIN ICE

The Inside Story Of An Interactive Dream and It's Continuing Fight For Survival:

by the Editors of *Fusion*

what went WRONG

the Fall and (Hopefully) Rise

In the beginning was the Word. Or rather, the words. They flowed like manna from heaven as Trip Hawkins spun tales of wonder during his address at the 1993 Winter Consumer Electronics Show. The industry statesman, already famous as the founder of Electronic Arts, had a bombshell for the industry and press representatives gathered in Las Vegas. After a brief period of trying to ride both horses at once, Hawkins was leaving the software giant to devote his full energies to something called The 3DO Company.

This new venture's goal was to create a universal hardware and software standard for interactive multimedia. Repeated references to the VHS videocassette format only underlined the enormity of the undertaking.

The meticulous business plan impressed everyone. Hawkins believed the remarkable platform needed a uniquely structured organization behind it. It planned no hardware or software production.

The presentation positioned The 3DO Company as strictly a licensing and marketing group. Other companies would manufacture the hardware and multimedia software. The 3DO Company would supervise the grand design, coordinate advertising and promotion and cash lots of big royalty checks.

That momentous announcement climaxed three years of low-visibility, nuts-and-bolts effort. Back in 1990, all Trip Hawkins had was a dream. From his vision of a unitary multimedia format sprouted the entire 3DO project.

Hawkins theorized that if Electronic Arts could develop a hardware platform sufficiently advanced over the current state of the art, the potential manufacturers would support it instead of developing their own hardware. This would virtually eliminate system-based market segmentation, give consumers access to a much wider range of software, and simplify distribution and retailing.

EA launched a skunkworks project to explore the possibility. Soon, David Needle and RJ Mical created Opera, the technology Hawkins needed to realize his vision. Needle designed the hardware, while Mical produced Opera's operating system.

Cross-fertilization fueled the creative process, Mical recalls. "Dave and I had adjoining offices with a secret door connecting them. Sometimes we'd lock the outer doors, open the door between our offices and just work on Opera together for a day at a time."

Having exploded beyond the confines of its original charter, the project became a separate company under the unassuming name of SMSC in September 1991.

By the time Hawkins addressed WCES, the entity that had become The 3DO Company had grown far beyond the dream. It now had a prototype system, hardware and software support, a group of prestigious investors (Matsushita, MCA, Time Warner, Creative Technology, Electronic Arts, GoldStar, AT&T and Kleiner Perkins Caufeld and Byers) and a logo that looked suspiciously like the well-known EA symbol.

That day in January 1993, Hawkins and his crew were spellbinders. By the time the presentation ended, most of the journalists and a fair number of the industry executives on hand felt as though they'd been given a privileged glimpse into the future of interactive gaming.

Support for the 3DO platform grew larger and larger with each passing day. Writers and broadcasters had the huge machine turned up all the way. The media message: The 3DO juggernaut was loose, and nothing could stop it.



Questions at the Beginning

That triumphal sweep through the industry never materialized, and it probably won't. Instead of rushing to the front of the pack as a standard, 3DO has barely hung onto a slice of the market against increasingly strong competitors.

The seeds of the platform's subsequent troubles are rooted in that historic presentation and the business plan it unveiled to a breathless public. Flaws, invisible at the time, rose up to smite The 3DO Company with brutal blows from every direction.

The presentation, uplifting as it was, caused difficulties down the road. "We talked about all the things that would be happening in the future," recalls Hawkins. "Then people discovered that these things weren't happening as fast as they expected." Disappointed expectation cut into 3DO's momentum and inspired a backlash against the whole idea once the comforting warm glow from the premiere faded.

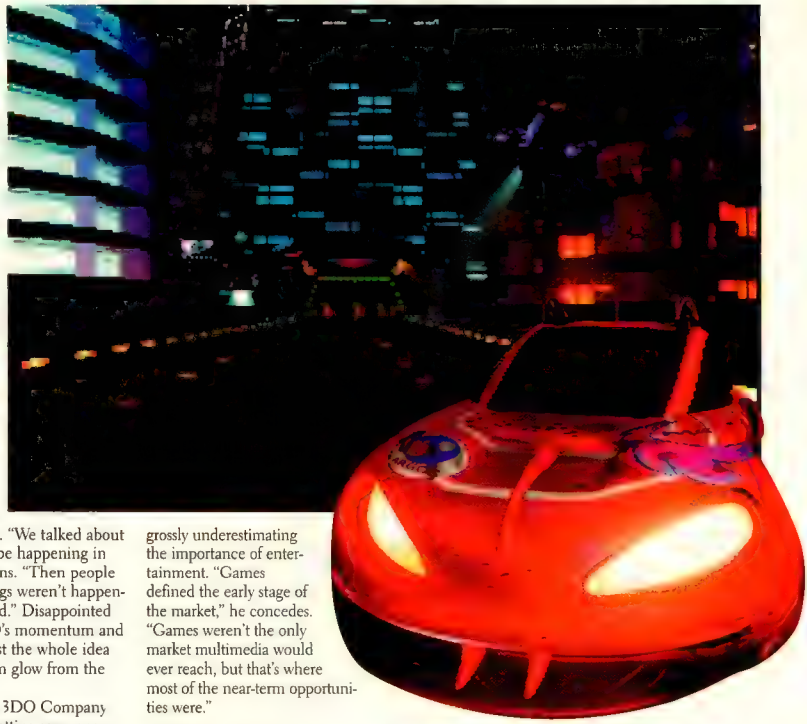
The basic setup of The 3DO Company also caused difficulties. Letting someone else build the factories sounded good, but no one considered the concomitant loss of direct control.

Until things started going wrong. Then 3DO executives realized, to their horror, that even when they confronted problems they could do little more than suggest solutions to hardware and software licensees. The juggernaut had no steering wheel!

The licensing structure divided hardware and software makers. Most signed up to do one or the other, seldom both. That made it impossible to implement the razor-razor blade strategy that worked so well for Nintendo in the late 1980s. The outfits that made the machines couldn't cut price and make it up on the software side, because they only manufactured consoles.

"The biggest challenge that 3DO has is that their model is too fragmented," states John Taylor of Arcadia Investments. "It violates the historic model of a single hardware-software standard: being able to subsidize losses on the hardware side with profits from the software side."

Hawkins and his colleagues had their eye fixed too firmly on the future and neglected the demands of the 1993 market. "We talked about a future in which interactive multimedia was as ubiquitous as TV or the telephone," says Hawkins. He believes this led to grossly underestimating the importance of entertainment. "Games defined the early stage of the market," he concedes. "Games weren't the only market multimedia would ever reach, but that's where most of the near-term opportunities were."





3DO: Chronology of a Meltdown

1978 Trip Hawkins joins Apple as its first business marketing manager.

1982 Trip Hawkins founds Electronic Arts.

1985 Trip Hawkins swears off video game systems in favor of computer entertainment software.

1989 Electronic Arts introduces its first video game cartridges for the Sega Genesis. EA comes to a last-minute agreement to become a Genesis licensee.

Oct. 1992 3DO signs Electronic Arts as first software licensee.

Jan. 1993 The 3DO Company unveils 3DO technology at Winter CES and announces equity partners Matsushita, Time Warner, Electronic Arts, MCA, AT&T and Kleiner Perkins Caufield and Byers.

May 1993 The company completes first public offering, raising $48.6 million.

June 1993 3DO approves final silicon chipset for mass production.

Oct. 1993 Panasonic REAL 3DO Interactive Multiplayer launched in U.S. retail stores. US West selects 3DO technology for cable set-top terminal in network trial.

Feb. 1994
- Studio 3DO forms in-house development group to produce titles for 3DO.
- Suggested retail price of Panasonic's REAL 3DO drops from $699.95 to $499.95.

June 1994
- 3DO raises $37 million.
- More than 60 3DO software titles are available.
- Capcom, Konami, Taito, Jaleco, Koei, Bandai and Tomy announce that they are developing video games for 3DO, including Super Street Fighter II Turbo.

Aug. 1994
- 3DO establishes European operations, names Bob Faber managing director.
- 200,000 3DO systems sold to consumers worldwide.
- 3DO announces M2 accelerator, a 64-Bit upgrade for current system.
- Panasonic launches 3DO system in Canada.

Sept. 1994
- Panasonic launches 3DO system in U.K.
- Panasonic lowers U.S. suggested retail system from $499.95 to $399.95.

Nov. 1994
- Studio 3DO KK established in Japan.
- GoldStar launches its 3DO system in the U.S. and Korea at $399.95.

Dec. 1994
- Panasonic introduces its new 3DO system, the FZ-10 in Japan.
- Robert Lindsey joins 3DO executive team as senior vice president of marketing and general manager of Studio 3DO; John Orcutt joins as senior vice president of business operations.

May 1995
- 3DO unveils 64-Bit M2 technology.
- 200 titles available for 3DO worldwide.
- Studio 3DO unveils first wave of titles for 1995 release.
- 3DO launches World Wide Web site.
- Any Channel (PO'd) joins 3DO Affiliated Label program.

June 1995
- LG Technologies launches its 3DO system in the U.S.
- Electronics Boutique lowers its price for the LG Technologies system to an effective price of $299.

The 3DO Company's optimistic forecasts hinged on support from early adopters. This group of consumer electronics zealots, the presentation explained, would rush to stores to buy the new platform without hesitation, regardless of price. There were supposedly a half-million people driven to be the first on their block to acquire such gizmos, and they would make the new 3DO platform viable in its first year.

"We overlooked one thing," admits Hawkins. "The 3DO is not a personal computer."

The sales projection models were derived from case histories in the home-computer market. Console consumers are a different breed, and few whipped out the plastic.

"We should've taken more of a video game approach," Hawkins now believes. "It's a marketing issue. What you want to do is make the best software the focus of the advertising." Too much of the limited budget went for hardware image ads and scattershot software commercials.

No one who saw the demo could deny the hardware's strengths, but there were also weaknesses. The most important was the small amount of RAM included. The system's speed, the engineers felt, would eliminate the need for a lot of internal memory.

The original specs called for only 1MB of RAM. Developers quickly established the inadequacy of that amount and requested an increase to 2MB. "We gave it three for good measure," says RJ Mical, now a vice president at The 3DO Company. With 20/20 hindsight, it is now clear that even 3MB was inadequate. It led to numerous lengthy disc-access pauses and abrupt transitions between game phases. A problem that would not sit well with most game enthusiasts.

The Rocky Rollout

Christmas 1993 sales of 3DO hardware failed to live up to company projections and industry anticipation. Fewer than 150,000 units moved into homes. Even the platform's astounding software-to-hardware ratio, 8:1, couldn't disguise the stumble out of the gate.

Panasonic's REAL Multiplayer not only posed no threat to the still-growing 16-Bit market, but it also couldn't even match the volume achieved by Atari's Jaguar and the Philips CD-i. The dream may not have died, but it sure took a wallop.

Failure resulted from many factors. A canvas of industry analysts identified these contributory causes:

1. Brand recognition. Panasonic called its machine, the only one actually in stores in time for the holiday season, the REAL Multiplayer. This decision negated most of the prerelease publicity.

2. Price. The initial $699 retail price deflated demand for the product. At seven times the cost of a Genesis or SNES, the REAL Multiplayer was too expensive for the console audience.

3. Software. There weren't enough games, nor were they good enough, at launch. Part of the reason was poor development tools. Assembled in haste, they turned out to have glitches and gaps that made it very hard for publishers to exploit the 3DO's capabilities.

4. In-pack game. The disc included with the console, **Crash 'n Burn**, received early praise for some effective graphic sequences, but word-of-mouth soon downgraded it to its proper status of a C. The extremely short course and absence of play variation doomed it to a short play-life.

5. Advertising and promotion. The 3DO project couldn't match the amount of support Nintendo and Sega threw behind their 16-Bit systems. While 3DO tossed around figures that seemed impressive on their own, the cruel truth was that the company's promotional budget was only a fraction of its larger competitors'. With little in the way of merchandising and brand tie-ins (a staple of both Nintendo and Sega's approach to building awareness), the 3DO was literally overwhelmed from all sides.

6. Killer apps. Put simply, 3DO lacked a system-selling software title. There was no game that could do for it what Super Mario Brothers and Sonic the Hedgehog had done to put Nintendo and Sega on their respective maps.

Cracks in the Ice

Momentum can be negative as well as positive. It can pyramid success, but it can also pile failure on top of failure.

The pokey start flipflopped everything for 3DO. Oversold one day, it was widely scorned the next. The media buried the system more times than Freddy and Jason combined.

Many 1994 events furnished additional fodder for the nay-sayers, including an attempt to enlist a cross section of the industry that ultimately backfired. The company hoped that potential console manufacturers would abandon the idea of developing their own systems when they beheld the majesty of 3DO. They took their hardware and software demos to all the major players, as well as companies they thought would be eager to enter interactive multimedia.

The road show cemented old alliances and forged new ones, but it also bred competitors. "We didn't have a big enough technological lead," Hawkins summarizes.

"We were naive," he says. "Some of the companies we met looked at what we had and said, 'Hey, we can do that too!'" It wasn't long before Sony and Sega had prototype machines that eclipsed the 3DO in many ways.

Ma Bell Hangs Up

Adding to the mounting pressure at 3DO was AT&T's decision to withdraw from the project and divest itself of 3DO stock. The project needed AT&T's prestige and clout, and executives at 3DO reassured insiders that AT&T was committed to the project. Their promised 3DO format, which would have delivered on at least a portion of Hawkins' great idea, never materialized.



The biggest explosion came at the start of the 1994 holiday season. To obtain increased advertising funds, 3DO imposed higher software licensing fees. The total cost was still lower per unit than rival consoles, so 3DO didn't expect the storm of outrage that greeted its memo.

The company's policy of itemizing the fee proved again that a little knowledge can be a dangerous thing. Publishers saw the allocation for advertising and complained that they'd rather retain the bucks to promote their own titles instead of bankrolling a campaign for products that returned no direct profits to them.

Vague wording further complicated the tense situation. The announcement *seemed* to be charging an extra $2 per *disc*. By the time 3DO managed to straighten things out, assuring third-party companies that the charge was $2 per *title*, several multidisc entries were delayed long enough to miss the holiday season.



Living in the Looking Glass

Developers are suckers for new technologies. Once upon a time the 3DO was the Next Big Thing.

When it was unveiled, 3DO's list of developers read like a who's who of game creators. The sizzling effects and broad awareness that the machine had fostered within the financial markets allowed it to jump 20% in value at its first CES.

The effect was quite different on the developers themselves. As one programmer remarked at the time: "This was kind of a wake-up call. The 3DO is a very easy system to get up and running on, and I get the impression that everyone at CES thought their stuff was going to blow everyone else's games away. Then they saw that everybody else's stuff was just as good, or better than theirs. It had kind of a chilling effect on them. It was like: 'Well, back to the drawing board.'"

Developers tend toward artistic sensitivity. So while the bean counters simply pointed their products at another platform, developers reacted emotionally.

Suddenly, it all seemed like a sham. Developers became disenchanted with the system. Programmers, artists, and musicians began to grumble within months of the 3DO's release. "Nobody wants to get involved in a 3DO project at this point," a leading producer admitted.

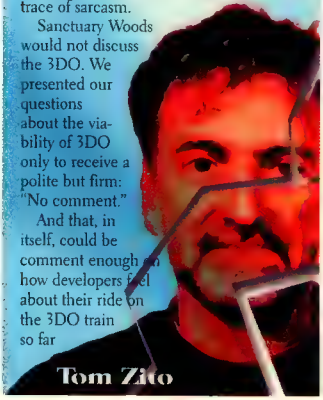
A love potion was clearly in order, enter the M2 savior.

"Vaporware," declared Tom Zito, president of Digital Pictures and early advocate of the 3DO philosophy. "All they were showing [at E3] were demos, and we know that demos are just that—demos."

Zito has yet to cool completely with the 3DO itself. "We consider the 3DO a viable system and we're continuing to develop for it," he said without a trace of sarcasm.

Sanctuary Woods would not discuss the 3DO. We presented our questions about the viability of 3DO only to receive a polite but firm: "No comment."

And that, in itself, could be comment enough on how developers feel about their ride on the 3DO train so far



Course Corrections

Prospects for a second straight lukewarm Christmas forced 3DO to re-evaluate every facet of the project. During the1994-'95 winter of its discontent, 3DO started to implement changes and make moves that have strengthened its hand.

With the showdown with Sony's PlayStation and Sega's Saturn coming in fourth quarter 1995, Hawkins and crew remain confident about the platform's chances of survival in a further-fragmented market, though previous predictions about huge market share are conspicuously absent. Among the reasons behind 3DO's upbeat attitude are:

1) GoldStar. Jim Ireton, vice president of sales and marketing, brought plenty of Sega savvy to his new position. GoldStar is a much more aggressive marketer than Panasonic and eye-catching packaging, lower prices and better ads are among GoldStar's contributions.

GoldStar's move into software is another welcome sign, with GoldStar capable of filling a lot of holes in a catalog, but creating the "game that sells systems" is doubtful—this year at least.

An extra dividend of Goldstar's active approach to the 3DO is the energizing effect their moves have had on Panasonic. The Matsushita subsidiary plans to step up advertising and promotion and will also introduce an in-house software brand. This erases the barrier between hardware and software licensees, increasing the likelihood that 3DO will be able to switch to the kind of software-intensive campaign that has motivated competing console sales.

2) Price. "They are clearly the cost leader at this point," observes Arcadia Investment's Taylor. Research into manufacturing economies paid off with a console that utilizes only two chips. A one-chip version should come off the assembly line in late 1995.

GoldStar successfully tested a $299 retail price, achieved with a $50 rebate coupon, in selected outlets last spring. Sources at 3DO claim that the 3DO equalled Sega Saturn unit volume in stores that carried both and had the GoldStar unit at $299. The price will be extended nationwide this month, and most analysts concur with a common sense that says the lower the cost the bigger the marketshare.

Some 3DO insiders expect the retail price to drop below $299 by next Christmas. After nearly two years as the highest priced console, 3DO now looks better ($299 with two games), at least on paper, than the PlayStation ($299 but no software) or Sega Saturn ($399 with **Virtua Fighter**).

3) Studio 3DO. "We started Studio 3DO to create 3DO-specific titles that we could ultimately use, in conjunction with our hardware partners, to drive the system and truly differentiate it," says Bob Lindsay, vice president of marketing and general manager of Studio 3DO.

Studio 3DO started a year ago, but it took most of that time to position it well. "If you look back a year ago, when they started to ramp up the Studio, the first few products we did weren't directed right at the core audience, the 18- to 34-year-old male."

Future releases have the 18-to-34 segment in the cross hairs, Lindsay believes.



"We're doing action games like Bladeforce that aren't just pure shoot-'em-ups but have a much bigger, richer story to them. The environments are bigger and more involved than they've been able to be on other systems."

Can 3DO Win?

"No one is going to win this round," says Hawkins. "The real war is coming." He believes that the combatants are already in the arena, and that none of them can rule the market as Nintendo did in the 8-Bit era. The near-future strategy is to keep the present 3DO viable as long as possible, arrange for production of the company's new M2 architecture in both stand-alone and upgrade models, while reaching agreements with those companies that emerge unsatisfied from the 1995 holiday season skirmish.

"Trip has tried very hard to convince people like Sega and Sony that in the world of the future, however many households there may be that use this advanced technology, the market is not going to be split by two companies anymore," notes Arcadia's Taylor. "It's going to be split by five companies. Therefore the dominance by any one or two platforms in the future is less likely than what we've seen in the past."

It's not going to be an easy sell, to judge by this comment by Steve Race: "There was a rumor going around E³ that there was a consortium of Sega, Philips and, I believe, Panasonic, all taking a look at 3DO's M2 technology. That seems to have fizzled. It is unlikely that proposition would ever come to fruition." The Sony Entertainment chief's assessment is open to allegations of bias, but the go-it-alone mindset is present.

Would that attitude change if the PlayStation disappoints? Sony has come to terms with VHS after Betamax didn't seize the mass market, so the template for cooperation exists, although it is equally necessary to point out that Beta's failure was in direct proportion to VHS's success, a description that has yet to surround the 3DO premise.

3DO: The Next Generation

The 3DO Company's main weapon for the battle of the future is the ubiquitously titled M2. "The generational jump has been fairly arithmatic in the last five to seven years," declares Bob Lindsay. "And now, for the first time in that period, we are geometric in our jump."

"Their chances for success are very heavily tied to the M2 upgrade and their ability to get some aggressive marketing and manufacturing companies to support it," says Martin Levine, editor and publisher of *Digital Technology*, about the prototype system The 3DO Company previewed at the Electronic Entertainment Expo in May.

Closed door demo tapes indicate that the M2 can move much more detailed and realistic graphics around the screen at a much higher frame rate than any existent console can do. Better image clarity and a load of effects capabilities are other claims.

"The M2 is very impressive technology," says Levine. "The very rudimentary demonstrations of it impress me even more than anything else I've seen. I'd like to see a complete game on the system before I say more about it, but I am impressed with it. The questions are when can they deliver it, at what price point can they deliver it, and who will support it?"

"Sony PlayStation is probably the best-accepted system. Next would likely be Nintendo's Ultra 64, [then] Sega's Saturn, very closely followed by 3DO–and 3DO may be able to usurp that."

–Gary Gablehouse

What 3DO isn't claiming is that it has deals to actually manufacture the boxes. Hawkins promises announcements by the end of summer, but the industry won't get serious about alliances until the M2 is more than videocassette eye candy. Some analysts wonder if 3DO has a better future as a vendor of technology than as the spearhead of a platform. "As a stand-alone brand, I think 3DO is not likely to survive," suggests John Taylor. "However, 3DO has some technology that may be appealing to other hardware vendors for cross-platform purposes or for specific kinds of functions."

It's this question of purpose that 3DO must now contend with while attempts are made to give the failed system a second chance. The outcome of their efforts will likely translate into an equally definitive epitaph for Trip Hawkins' original vision.

Foretelling the Future

Market analyst Gary Gablehouse of Fairfield Research comments on 3DO's probable placement in the system race: "We've done a number of studies trying to sort out who's going to finish where [and] the way the consumers are starting to cast their votes right now. The Sony PlayStation is probably the best-accepted system because of the brand equity of Sony itself. Next would likely be Nintendo's Ultra 64, [then] Sega's Saturn, very closely followed by 3DO – and 3DO may be able to usurp that. We started seeing purchase intent for high-end game systems pick up significantly in the third quarter (and maybe the tail end of the second quarter) of last year—so I think that 3DO is going to be tertiary [or] fourth level." ●



THE NET

YOUR MAP TO THE INTERNET. WORLD WIDE WEB.

COMMERCIAL SERVICES AND SPECIAL ONLINE EVENTS



PLANET HOLLYWOOD

Tinseltown Invades the Net

by Mike Stokes

The road most traveled through Tinseltown these days is on the information superhighway. Every major studio seems to have moved to the onramp without really knowing where it will lead them.

"Six months ago, none of our VPs knew what it was," says Robin Berman, an art director for Disney's web site, "now they all know what it is, and they all want it."

The larger question is, however, what will they do with it?

In the short time since studios began exploring the Internet, most have been proceeding with caution, providing a steady diet of action, adventure and sci-fi content that appeals to the 14- to 30-year-old male demographic that, for now, rules cyberspace.

"You want the first web sites that you do to be successful," says Bill Brody, manager of market research for 20th Century Fox. "You don't want to experiment too much."

"Not every film is the kind that would benefit by Internet or web exposure," adds Don Bucklet, Warner Bros.' VP of advertising and publicity who doubles as the designer of the studio's *Batman Forever* web site that logged nearly 2 million hits in its first two weeks of operation.

For Fox, the Internet has allowed their marketing staff the luxury of unleashing their arsenal of both film and television properties with sites for *Die Hard with a Vengeance*, *Mighty Morphin' Power Rangers*, *The X-Files* and even a site devoted to theories of who shot Mr. Burns on *The Simpsons* that enjoyed 25,000 hits in its first three days of operation.

"We have a tremendous amount of science-fiction properties, from *Aliens* all the way back to the '50s with *Invaders from Mars*, so we're thinking about filling up a web site that deals strictly with science fiction," reveals Brody.

Disney, the first studio to jump on the Internet bandwagon in October '94, shuns the conventional wisdom of net-user demographics. By publicizing everything from the animated *Pocahontas* to the romantic comedy *While You Were Sleeping* to Stallone's futuristic actioneer *Judge Dredd* on the Net, Disney continues to boldly go where no studio has gone before.

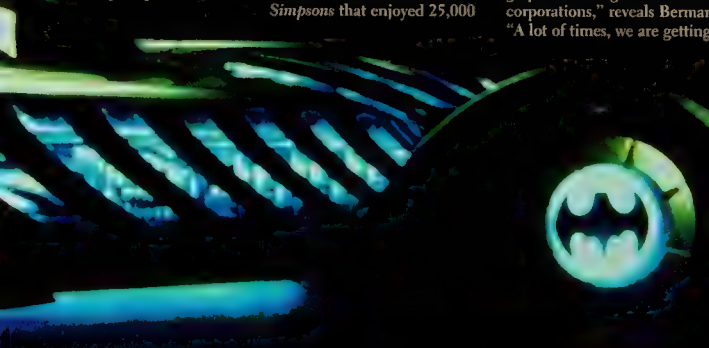
"Our predominant demographic is college students and corporations," reveals Berman. "A lot of times, we are getting families from Finland, Australia—I mean, we've got kids that are 3 years old saying, 'Mickey we love you.'



(http://www.neosoft.com/sbanks/xfiles/xfiles.html)

"Disney definitely has a presence out there on the Internet," she adds. "Most of the studios are basically promoting one film with a lot of content. Right now, what we are trying to do is satisfy the users' needs by showing them what we have."

New Line Cinema has also been feeding the frenzy with their *Mortal Kombat* site and plans on expanding their on-line services with Brad Pitt's upcoming



THE NET



thriller, *Seven*, plus *The Mask II* and *Lost in Space*. Four films by American cult favorite and legendary Hong Kong action-hero Jackie Chan will also be available to net surfers beginning with *Rumble in the Bronx* set for a January release.

"Jackie Chan has a large group in cyberspace," says New Line's VP of distribution and production, Alissa Greer.

Hoping to expand their reach, New Line is also trying to find a place for the college coffeehouse crowd as well as action-addicted technobeasts through a short-lived *Basketball Diaries* site and a home page for their more intellectual subsidiary, Fine Line, best known for the documentary *Hoop Dreams*.

"We're targeting our specific demographic and hoping [other] people will get curious," added Greer.

As the make-up of net users changes, undoubtedly, so will the variety of movie sites to reflect it. To compete, however, a film will still have to lend itself to the new interactive medium.

"If the picture has compelling art, graphics or story ... it qualifies [for a web site]," WB's Buckley explains. "Whenever we do these things, I want it to reflect the film. It's all in service to the movie."

Even genre-heavy Fox acknowledges that as the make-up of net users changes, so will the type of films that are promoted.

"I was surprised," says Brody, "a lot of families have a computer in their house, yet a lot are just learning about the web. We expect that it's going to continue to grow a great deal."

Fox's predictions of growth are shared by every studio building a site.

"It's going to be as significant as television at some point in time," predicts Berman. "This year it won't be, next year it won't be, but the whole Internet is reinventing the way marketing people communicate to the public. It's no longer just a regional thing. It's a worldwide thing. It's something that, as the technology evolves, is going to become much more user-friendly, more efficient both visually and speed-wise.

"The biggest problem is the pipe is too small," she adds. "We're getting so many hits ... it's hard to keep up with the popularity from a hardware point of view."

However entertaining, visually stimulating or elaborate web sites may become in the future, it is the idea that the user base may one day become as prevalent as television that intrigues studio bosses.

Like any industry, the bottom line, the bottom line,

"You can't look at what it is today, because you're ir
like a retirement ad, when it comes to Internet tech

Hollywood's Top 5 Web Sites:

1. Disney's Buena Vista Movie Web
http://bvp.wdp.com/BVPM/

Disney's Buena Vista site offers more than your average web site. It's got the basics: film synopses, cast and crew info and film clips (in their case for flix like *Pocahontas*, *Judge Dredd*, *Dead Presidents* and *Mad Love*)—and it boasts quite a few interesting frills as well.

One of the more charming features allows you to run through the *Judge Dredd* Field Action Response Evaluation Test," where you're tested to see if you're in fact worthy enough to join the ranks of Mega City One's judges. (Yes, kids. You *too* can be a fascist.) The user must navigate his or her character through a riot situation, apprehending "perps," while trying your damndest to stay alive.

While this may sound fairly basic, it's actually a cool diversion from other *Choose Your Own Adventure* challenges.



2. Batman Forever
http://batmanforever.com/

You're in Gotham City ... where do you want to go today?

From previews of the latest Bat-Movie at the Gotham Cinema (recommended only if you have a strong stomach for long downloads) to the Gotham City Library and its research material on the film's cast and crew, Warner has done a superb job of capturing the flavor of the subject matter here. The Gotham Radio Station lists a variety of artists and songs on the movie soundtrack while simultaneously allowing users to access extensive artist backgrounds and tune clips. Other features include a post office (where Internet users can engage in rapid "chatting" that requires annoying reloads), a selection of mind games from the Riddler and a look into the Batcave's arsenal, armory and vehicle specs courtesy of the Bat-Computer. Plus, Warner

and if an investment of $50-100,000 can potentially reach as many moviegoers as the multimillions spent in print and broadcast marketing campaigns, it is an option worth exploring.

Not only does a web site offer staying power over the costly newspaper ads that line bird cages after one day or television spots that vanish into thin air in 30 seconds, but it also has a worldwide reach. Therefore, a web site can be set up before an American premiere and left up and running throughout a film's international release.

"Relative to our world and what we do and what we pay for prime-time television, [web sites are not expensive to implement]," says Buckley. "I think that because this is our first one, perhaps we've learned from some mistakes that won't be repeated next time, and perhaps that will translate into even more economical implementation.

"It's a little bit more expensive to keep content refreshed, which is something we will always do. We will never allow a site to exist without fresh content or a compelling reason to be there."

In these early stages, a lot of guesswork goes into determining the value of web exposure.

"Right now, it's really not measured too well. We don't know how many people we're getting out of it, so we don't know what the return of it all is yet," says Brody.

"The film division has different requirements than other divisions—they have a different window. It's important for them to get up at a certain time and coordinate well with the movie and then within a few months of the movie, they're going to go away. I guess in the case of a movie like *Batman*, that would have legs and would continue as a site, but I even question that."

Sandwiched somewhere between marketing and publicity, the Internet has taken studios by surprise this year as they determine where web-site development will fit into their structure in the years to come.

"Every company is going to run into this," Berman says. "'What's the web? You mean I've gotta pay for it? How much is this gonna cost?' ... You can't look at what it is today, [because] you're investing in the future. As much as that might sound like a retirement ad, when it comes to Internet technology, you really are investing in the future.

"The web is a very new thing for everybody," she continues. "It wasn't in last year's budget, so internally people are having to scramble a bit to find a budget for it, so the budgets will be lower this year than they will be next year, because it just wasn't anticipated at all. It was like last year there wasn't any television and this year there is television. That's as dramatic as a change this is in terms of an advertising medium."

And every studio has great expectations that the Internet will soon reach the masses.

"We're really committed to this, and we're putting a very big effort behind it," says Brody. "We will be coordinating our work with a lot of divisions of the company."

"It's kind of an awareness-building arena," says Greer. "You have to test the limits, because you really don't know what they are."

"We spend a lot of our time educating and planning right now," says Berman. "That's why you're going to see Disney really evolve, especially in the next six months. What you're seeing is the ground work, and we're just about to take off."


(http://www.mca.com/waterworld.htm)

And with the rest of Hollywood blazing trails into cyberspace, the information superhighway may soon experience a level of gridlock the likes of which not even Los Angeles has ever seen. Only in this case, rather than the roads looking like parking lots, they may look a little more like drive-in movies ... without anyone getting locked in the trunk.

vesting in the future. As much as that might sound
nology, you really are investing in the future..."

...ers good at adding new features each week. If you have that on the brain, here's some new home...

3. Paramount
(http://www.paramount.com)

Present in the Paramount site is an "interactive" *Star Trek: Voyager* text feature that (while nowhere as entertaining as the Judge Dredd game) is vaguely interesting. The premise has you awakening in sickbay, suffering from memory loss. You must bone up on *Star Trek: Voyager* facts before the ship's holographic doctor will deem you ready to return to active duty. Audio and video clips accompany this feature if you're up to the task, but the site really suffers from a lack of new information updates. And when we did get an update, it was from the executive producer of another UPN program *begging* you to watch his show!

4. Who Shot Mr. Burns?
(http://www. springfield.com)

The Simpsons "Who Shot Mr. Burns?" web site establishes its purpose early on: "This web site," the introduction reads, "is dedicated to answering the question, 'Who Shot Mr. Burns?'" but not so dedicated as to simply serve up the answer on a luxurious silver tray. Rather, it offers users a tip of the hand ever so slight as to benefit the astute *Simpsons* viewer while not spoiling the mystery. The site is highly interactive and frequently solicits user participation in polls, features bios of possible suspects and promises to dish out clues from time to time as what has to be television's most shocking cliff-hanger since that guy was shot on *Dallas* back in the early '80s.



5. Universal
(http://www.mca.com)

This site makes the top five for its sheer content, with material from a variety of media, including movies like *Apollo 13* and *Waterworld* getting top billing. The site suffers from some truly horrendous downloads that offer no alternative paths until the visuals are puked out of the phone line. If you have time to blow and want a preview of the most expensive movie ever made, then this site is nirvana.

Honorable Mention:
Fine Line (http://www2.interpath.net/fineline)
New Line (http://www.mortalkombat.com/kombatbegins)

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by mike stokes

cyberDOME

From Hoops and Hockey to Racing and Rugby, the Net is an All-purpose Arena

The Internet is fast becoming the place to be for armchair quarterbacks, couch potato coaches and statistics geeks of all sports.

Whether you want to check on the latest transactions of the Dallas Cowboys or the Bolton Wanderers (depending on which country's type of football you follow), the Web's worldwide reach is an ideal venue for fans.

For the growing legion of fantasy league fanatics (those irritating fans who completely abandon team loyalty by drafting players from professional leagues to score points in imaginary ones), the Internet is the equivalent of courtside seats.

Nearly every major sports franchise in both the professional and collegiate ranks posts detailed game and past and present season results for the benefit of their Net-using fans. Sites featuring upcoming draft predictions where fans are able to voice their opinions are also hot-spots among the amateur general managers.

Unfortunately, the most accurate and resourceful sports sites are rarely among the most entertaining for fans more interested in how the game is played and the athletes who are playing it than the final score.

Some of the best sports sites on the Web come from upstart sports like arena league football and the American professional soccer league. In an attempt to build their fan bases for the future (or at least looking for cheaper ways to advertise), these sports devote more energy to Internet exposure than teams who have the luxury of big television contracts. Fan-supported sites are also a lot of fun to explore, and although they may be tough to find, have more news with attitude than official team propaganda.

Speaking of attitude, at the Dennis Rodman fan club site, net surfers are treated to a lot more than the standard diet of rebounds and games missed by basketball's bad boy. A no-holds-barred section of quotes by and about the superstar as well as a Dennis Rodman hair archive are featured.

Fans have also set up unofficial team pages with photos, news and home-team headlines like "Shaq dunks on Jordan."

In spite of what the folks living around Disney World might think, however, the recently unretired Air Jordan also reigns supreme in cyber-



MICHAEL JORDAN (http://gagme.wwa.com/~boba/mj.html/)

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DENNIS RODMAN
(http://www.texas.net/users/pmagal/)







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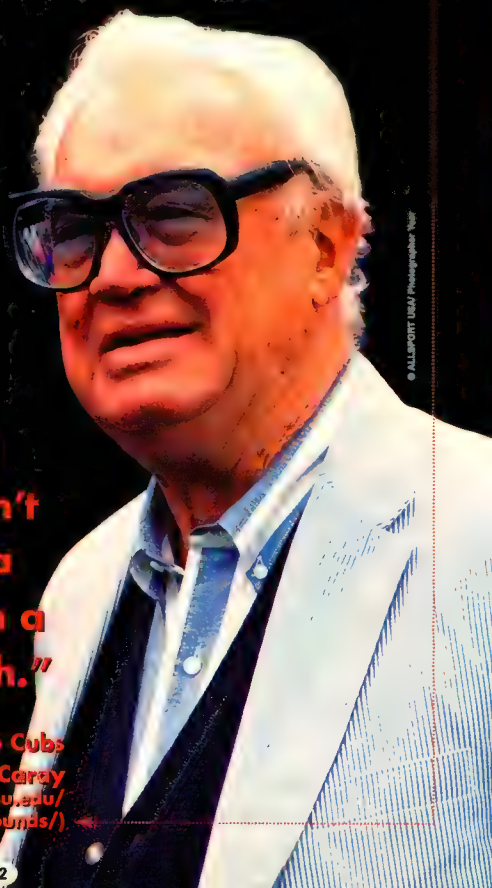
space. With a "He's Back" site as well as a critically acclaimed Michael Jordan home page, the Chicago Bull is consistently one of the most popular sports personalities on the Net.

Broadcast sports powerhouse ESPN has also taken to the Net with ESPNet SportsZone. Featuring the day's biggest sports stories, often with the same degree of sarcasm and wit that makes the network's *Sportscenter* a hit, ESPN's site is both slick-looking and informative.

Another top site is NFL Sideline, which is a gridiron trivia game for fans in cyberspace. By answering questions of varying degrees of difficulty, players march their team down the field as many times as possible during a two-minute warning drill.

All is not lost for the big leagues, however, as the Net's reach expands. The major spectator sports are taking notice and slowly starting to respond with a mixture of stats, ticket information and entertainment.

At the Chicago Cubs home page, major league baseball's beloved losers feature soundbites from their hall-of-fame sportscaster, Harry Caray. Fans can download his immortal, "Holy Cow!" or various Harryisms like, "High pop fly. That wouldn't have been a home run in a phone booth." Teams like the NBA expansion Vancouver Grizzlies, a town better suited for ice fishing than basketball, will feature photos of the team's cheerleaders as prominantely as its players, giving new meaning to the term spectator sports.



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"Holy Cow! That wouldn't have been a home run in a phone booth."

– Chicago Cubs Sportscaster Harry Caray (http://www.mtsu.edu/~williams/sounds/)

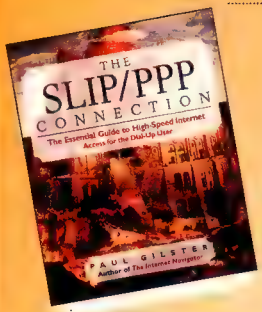
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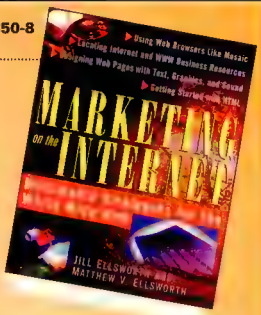
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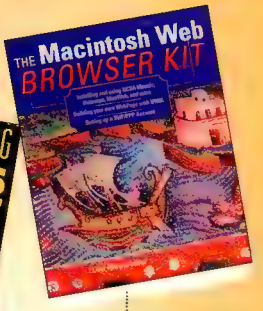
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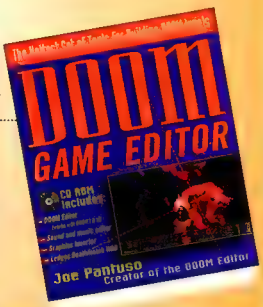


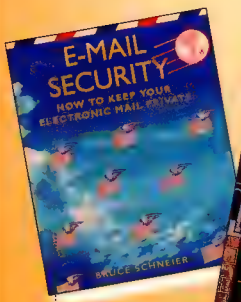
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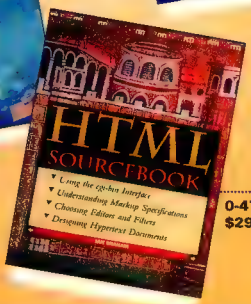
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SOUND
ADVICE

by Ed Dille & Andrew Swann

Many companies are producing extremely good, high-end sound cards in response to the demands of today's PC owner. For that reason, an informed decision must be based on more than the way the card sounds, although this is certainly of major importance. Consideration must include ease of installation. Must one be an engineer in order to install it properly? The software bundled with the card is also a factor to be considered. Most cards come with the obligatory "stereo rack," but some go a step further by providing software ranging from MIDI composers and editors to voice recognition. Sound cards are no longer just for use with games. They provide the PC user with many options and [illegible] depending upon the particular card chosen.

Although many high-end audio cards made today may sound the same, a major difference between them can be found in the way they handle wave-table sampling. Instead of emulating a musical instrument by altering a sine wave, the method used in FM synthesis, wave-table sampling uses recordings of the instrument and adjusts the signal to match the right tone. The result is a vast improvement over the unrealistic-sounding FM boards.

Having made these points, we will now get to the [illegible] the matter, the cards themselves.



Roland RAP-10

MSRP $349 Street Price $249

The name Roland is synonymous with electronic music. Along with Korg and Yamaha, Roland dominates the synthesizer market, and the company has been instrumental (pun intended) in expanding the MIDI musical interchange standard. So it should come as no surprise that the Roland Audio Producer 10 is more of a mixing studio in a box than a game-oriented card. This card is the Cadillac of sound. The synthesizer chips are from the Roland Sound Canvas chipset, and frankly, the clarity of these chips and samples blows most other cards straight out of the water.

For those interested in making music, the software provided with the card puts a whole electronic, 18-track studio on deck. Many of the new generation of cards ship with the almost-generic Voyetra suite, but Roland provides its own custom software that gives full control of the specific features of the card. The mixing panel gives the ability to combine MIDI and WAV tracks, a useful and almost unique ability.

The drawback to the Roland card, from a gamer's point of view, is its lack of Sound Blaster emulation. As a result, the card might not provide sound effects on the older generation of games. However, most games today provide MIDI output, and the Roland card simply has the highest synthesized sound quality of almost any product on the market.



Advanced Gravis Ultrasound Max

MSRP $199 Street Price $189

The sound quality of the Ultrasound is not quite up to the standards of the RAP-10, but this card is still big musical iron for those who not only want the best in sound for their games, but also want a viable desktop composition and recording source.

Advanced Gravis put solid wave table synth capabilities on their card and more importantly, also gave the user complete control over defining and loading patches. Patches are the samples used to create the instrument sounds on a wave table board. This makes the Ultrasound basically a high-quality sampling synthesizer. Sampling synths are extremely expensive pieces of equipment, so the truly musically minded have always kept a warm spot in their heart for this line of cards.

Unlike Roland, Advanced Gravis doesn't ignore the fact that Sound Blaster is the de facto gaming sound standard, but their solution isn't the best in the world, either. The Ultrasound Max ships with a TSR, **Mega-Em**, that provides software emulation of the Sound Blaster, as well as of Roland products This is a clunky solution, only a step ahead of Roland's total lack of support.

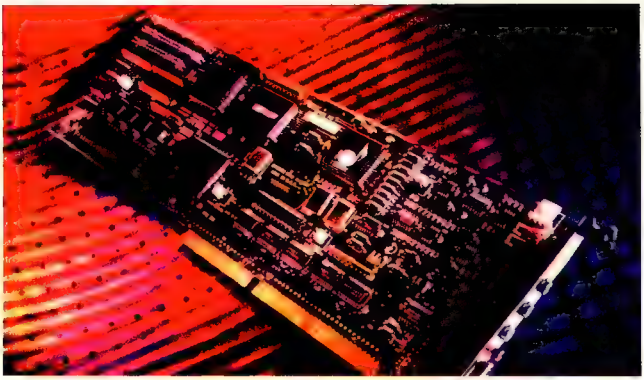
But more and more games are supporting the Ultrasound directly, and while Creative Labs tends to put a bit more distance between themselves and developers as they grow in size and influence, Advanced Gravis is, as they say, trying harder. Gravis actively woos developer and industry interest. Expect more games to ship directly supporting the technological capabilities of the Ultrasound Max.

Orchid SoundWave 32+ SCSI

MSRP $279 Street Price $200

The SoundWave is the Swiss Army knife of the multimedia world. It comes with its own microphone and speakers, it acts as a SCSI controller for CD-ROM drives and it even comes with a set of multimedia speakers. Oh, yes, it also does sound.

The SoundWave is not the best sound card on the market for musical reproduction, but it does a fine job for most gamers.



The music is crisp and the patches are solid. Sound Blaster FM synthesis support is onboard and almost as good as an actual Sound Blaster.

What really makes this card stand out is a great software suite. Not great for musicians, particularly, but more for people who want fun stuff to do with their new piece of hardware. There is a breed of user who puts down $200 on a peripheral and expects it to quack like a duck. Well, Orchid has that group pegged. The software comes with the obligatory mixers, players, level controls and boring musical stuff, but they also put in the *fun* stuff. The best piece of software is the personal effects module, which distorts the user's voice to sound like anything from Mickey Mouse to Darth Vader.

Also in the suite is **Quick Voice**, a voice-recognition system to give commands to the PC. The recognition is somewhere around 70 percent complete, but the training time is fairly low.

On the negative side, the speakers that come with the unit are cheap throwaways taking up space in the box that could be occupied by perfectly good air. And sometimes the voice input and effects features lock due to the mike being too "hot."

Overall, the Orchid is a good all-round package that doesn't do any one job better than the best of the market but does a little of everything and throws in some fun stuff.

Reveal Sound FX WAVE 32

Street Price: $179

The Reveal is based on the Ensonic wave samples used in a number of pieces of professional music equipment. While this sound card should stand out in the crowd, the MIDI quality is not as high as one would expect, flat and tinny on even the best headphones.

The Voyetra suite comes with the SoundFX WAVE to handle basic chores of sound editing and sequencing. The composition program that comes with the board, **SuperJam! Jr.**, is less than inspired. Though it can claim ease of use, garbage can lids also claim this distinction. The scariest part of **SuperJam! Jr.** is that there is probably another **SuperJam!** out there.

There were problems getting the SoundFX WAVE 32 to respond to its software setup routine, giving consistent error messages with almost every attempted configuration. While this board supports many different emulations commonly used in games, it might not be the best choice.

Turtle Beach Tropez

Street Price: $200

Turtle Beach, a company that's been working with PC sound since 1985, wows us with its Tropez. It combines 16-Bit recording/playback with the ICS WaveFront synthesizer and SampleStore technology

Of course, there is a "rack system" and editors, but the appearance is a breath of fresh air. While there is only so much you can do with a multimedia rack, this one's appearance says COOL. Not only does it look good, it also allows users playback control from the title bar of any Windows program. SampleStore technology makes it possible to load any WAV file and use it as a MIDI instrument. The Tropez allows upgrades to a maximum of 12 Meg of RAM using standard SIMM chips, vastly increasing the number of instruments.

Other cool pieces of software come with this package. The **MousePlayer** allows the user to choose any MIDI instrument the Tropez has and play it back using a mouse or keyboard. **Microwave**, is an easy-to-use OLE (Object Linking and Embedding) compatible sound recorder. **Stratos** is an introductory song-writing package.

The Tropez is also very versatile. With built-in support for SoundBlaster, AdLib, Windows Sound System, MPU-401 and general MIDI, there should be no problem getting stunning sound out of any game or application. The card also serves as a CD-ROM Interface supporting AT-API Enhanced IDE.

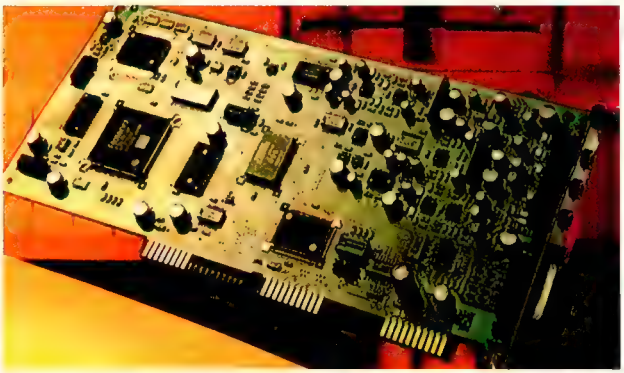
The sound is sharp and clear, rivaling even the RAP-10. The total harmonic distortion rating is a mere 0.01 percent that, in itself, says a lot. Short of professional use, this card can fulfill the needs of any player.

Creative Labs Sound Blaster AWE32

Street Price: $265

Last but not least is a new entry from the company that set the de facto standard for PC sound, Creative Labs. The AWE 32 is a leap forward in card technology, and could easily bear the subtitle "Roland Killer."

First and foremost for the games enthusiast, the AWE32 is, obviously, Sound Blaster compatible. Just to be funky, Creative Labs has also included Sound Canvas and MT-32 compatibility.



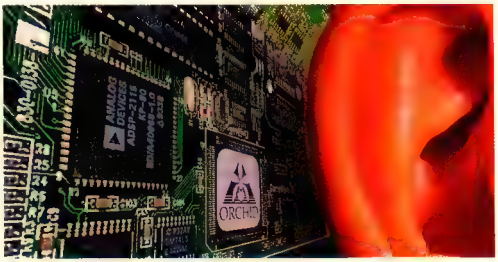
The heart of the AWE32 is the EMU8000 integrated audio digital signal processor. The E-MU technology was originally offered as daughter card for the Sound Blaster 16. But the AWE version adds chorus, reverb and sonic positioning technology called QSound to the mix to create a strong heir to the Blaster line.

A meg of ROM samples drive the wave table synthesis on this card, and to coin a pun, they sound awesome. The MIDI playbacks are barely distinguishable from the RAP-10, an incredible performance. Digitized sound comes through without hiccups or static and, like all the sound, is crisp and clean as a church bell in the morning. This card even makes FM synth sound passable.

Utilities are included to add chorus and reverb effects to the FM functions for games that will only support this mode. If you have to live in a bad neighborhood, at least you get to live flashy.

But Creative has made the leap many others haven't: A premium sound card requires a premium software bundle. A good part of the strength of the RAP-10, not to mention the Ultrasound Max and SoundWave 32, is the proper software selection. The first, maybe best, software in the Creative Labs lot is **HSC Interactive**.

HSC is a multimedia authoring tool using iconic representations to allow intuitive placement of elements. Editing of the elements allows the user to make on-screen changes. A run-time module is included to play the finished presentations.



The **Vienna Sound Font Studio** allows sample downloading, sample managing, present editing and supports multisampling and multilayering techniques. It also allows effects such as reverb, chorus and vibrato. SoundFont banks, libraries of instruments that have raw samples and presets that define the articulation of sound playback, can be downloaded to the AWE32 allowing enhanced MIDI playback.

Voice Assist and **Text Assist** give voice-to-command and text-to-voice recognition, respectively. **Cakewalk Apprentice**, a fairly common but very competent sequencer is also bundled.

The recording capabilities of this card don't quite match the Ultrasound, and the music studio aspect isn't as tight as the RAP-10, but this is a card trying to be all things to all and doing a good job at it.

Unless games are written to take advantage of the advanced features of the AWE32, it is a very slight improvement over the SB16. Some developers are annoyed with Creative Lab's caginess to give out the specifications of their card, making it difficult for custom drivers to be written without going to Creative for "black box" drivers. With a number of the more aggressive companies begging for developers to support them, some designers may not bother with the AWE's impressive new feature set. Only time will tell.

It should not be difficult to find a card to meet your needs and price range. Keep in mind, however, that wave table synthesis is here to stay. In the future, games will take full advantage of this quality of sound. The growth in the technology of the PC sound industry is still gaining momentum and is not expected to crest any time soon. ●

Surround Sound for Your PC?

Now that you have shelled out the cash for your sound card and speakers, what more can you do for your PC's sound? NuReality has the answer in the form of its Vivid 3D series of sound enhancement systems. NuReality offers three flavors in this line, the Vivid 3D, the Vivid 3D Plus and the Vivid 3D Pro. The 3D controls volume and SRS on/off where the 3D Plus and the 3D Pro add controls for space, center and mono or stereo input source. Based on patented SRS technology, dynamic three-dimensional sound is created without the need for extra speakers. This enhancement is not limited to stereo recordings. Mono recordings, run through a Vivid 3D controller, are delivered with synthetic stereo and 3D sound. The units measure from 5"x5"x1" for the 3D and 3D Plus and 8"x5"x5" for the 3D Pro, so little desktop is needed.

The space control allows the user to adjust the "width" of the audio image, meaning you can tell where the sound is supposed to be coming from. The center control provides the ability to enhance

One of the best advantages to the Vivid 3D series is the elimination of the "critical listening area." This is the position the listener has to be in, in relation to the speakers, in order to get the full stereo effect. With Vivid 3D, this problem is negated and full ,rich stereo sound can be enjoyed from any position in the room. The Vivid 3D Pro packs a 6.5 watt per channel amplifier for use with non-amplified speakers. There is also a line level output for use with amplified systems. The Pro is also available in an ex version which is exactly the same except that it is not amplified.

The Vivid 3D systems are not limited to the PC. You can use them with your cartridge game platform as well as your home stereo. After using a Vivid 3D system once, you definitely will not want to be without it.

How much will it cost, you ask? After looking around, we were able to find the Vivid 3D for around $60, the Pro ex for about $90 and the Pro in the $120 range, giving it a very high "bang for the buck"



BOOT TO THE HEAD!

Toshinden *Kicks Up a Storm on the PlayStation*



Battle Arena Toshinden, designed by Takara in Japan, comes to the U.S. flying high on the wings of the best word-of-mouth of any disc for the Sony PlayStation. If there's a system seller in the "first wave" software catalog, this is it.

Toshinden was the one game that leapt out at electronic entertainment journalists who test-played the Japanese version of the PlayStation prior to its introduction in this country. It was nearly impossible *not* to be impressed by the impressive look, sound and speed of this one- or two-player contest.

Toshinden pretty much defines state of the art on the PlayStation.

Some console gamers have overdosed on fighting games after a half-decade of product saturation. **Toshinden** won't suck them back into the category.

TECH SPECS

PUBLISHER: SCEA
SYSTEM: PlayStation
THEME: Combat
MEGABITS: N/A
PLAYERS: 1
LEVELS: 5

Good as it is, Takara's fighter doesn't offer much new to fans of this genre. There's nothing revolutionary about the game play, though the implementation benefits tremendously from the beefy, high-powered hardware.

Nor is **Toshinden** going to wean the martial arts hardcore away from the latest permutation of **Street Fighter II** or **Mortal Kombat**. It takes a more streamlined approach to the subject than **SF2** or **MK** and lacks the elaborate command control system, with its many maneuvers.

Toshinden is compelling action entertainment for the rest of us. It's easy to learn, plays intuitively and has enough on-the-fly strategy to justify many enjoyable battle sessions.

The story line for **Toshinden** is the usual half-baked rationalization for arena combat, untainted by the tiniest shred of originality. There's some nonsense about an underworld—

perhaps "underground"? – tournament that supposedly attracts huge numbers of glory-hungry competitors. Since the game has only eight fighters, the scenario seems a little overblown.

The fact is, the plots in martial arts games are perfunctory, because no one gives a damn, really, about such niceties. They want bold characters, lethal weapons, special moves and lots of juicy frills. These things **Toshinden** delivers in abundance.

The smoothly rotating play environment is an immediate eye catcher. The high-impact presentation capitalizes on the platform's outstanding performance feature, its ability to move 360,000 polygons per second around the screen at high speed. **Toshinden** shows the kind of fast and furious game play that Sony hopes will become identified with its game machine.

The background artwork is appealing and nicely varied. It departs from the minimalist backgrounds of **Virtua Fighter** (Sega Saturn) to good advantage, so there is quite a bit more scenery.

Toshinden's fighters don't move out of the two-dimensional plane, except briefly when someone spins the playfield. At that point, the character executes a roll or similar move to end up turned 90 degrees from their original position.

The rotation cleverly masks this limitation. It conveys a believable 3-D illusion that lifts this treatment of arena combat out of the static, side-perspective mold of the classics (and Nintendo's forthcoming **Killer Instinct**).

The eight characters included in **Toshinden** are refugees from the fighting game hiring hall, where generic heroes and heroines wait for their chance to star on the Interactive Screen. It would take an expert in Japanese popular culture to pin down the inspiration for each of them, but consumers may get a feeling that they've seen some or most of these martial artists in other contexts. At least the characters cover a wide range of stereotypes, from the voluptuous Amazon with a whip (Sofia), to the still-capable ancient warrior (Fo Fat). The art style has echoes of manga and Japanimation, but the drawings are more detailed. Each participant in the tournament has a unique weapon and a small selection of special moves. The specials are magical rather than realistic like **Street Fighter II**.





"Good as it is, Takara's fighter doesn't offer much new to fans of this genre."

The PlayStation controller is ideally suited to the game's control needs. The Option Screen offers nearly two dozen different function setups, but most users will be quite satisfied with the default option. It assigns special moves to the twin left buttons, rotation to the two on the right and the two kicks and two weapon strikes to the four action buttons. Some will prefer a more compact control scheme, and some of the alternatives permit control of all moves with the action button. It takes faster fingers, but that presents no difficulty for the veteran combat gamer.

The documentation contains brief biographies that include such vital information as blood type and age. Most of the data can be ignored without penalty, though the descriptions of fighting attitude and special weapons are useful hints for formulating game strategy.

Footwork, except for the jumps and ducks triggered with the direction controller, aren't nearly as important in the game as the actual combat moves. When maneuvers put the contestants on opposite sides of the main display, they can slowly edge their way back into range, but nothing more elaborate. Vertical movement is good for evasion and attack.

Of course, the distance between the characters *does* affect the results of every strike, kick and special move. The kicks work best at close range, while the weapons are great for harassing foes at a distance.

Toshinden is the best piece of software now ready for the PlayStation. The theme may scare away a few buyers, but the majority will appreciate the excitement and visual richness.

B+ *(Arnie Katz)*



BALLS OUT

Diamond Drills and Outfield Thrills with Triple Play '96

It's been a quest that rivals the search for the Holy Grail. From the day that EA exploded onto the sports gaming scene with the Genesis version of Madden Football, the publisher has searched for a baseball game that would equally dominate. Last year, in fact, EA Sports released two different baseball engines—MLBPA Baseball and a new edition of LaRussa Baseball. Both solid efforts, but neither was a real hit.

Now we have yet another baseball engine from EA Sports, this one developed by a group called Extended Play. It attempts to combine elements from both of the earlier EA baseball sims, much as MLBPA made use of many of LaRussa's best elements. The pitch selection has been significantly increased, for example, with players able to select from among 12 different pitches by moving the direction pad up, down, left or right; each movement reveals three new pitches. The game also swipes a page from World Series Baseball with its catcher's POV on pitcher vs. batter confrontations.

On the down side, the game is too slow once the ball is hit, and the pitching can be a real pain in the butt. (On straight default selections—in which the player doesn't affect the ball's trajectory with the direction pad—pitchers start throwing wild by the second inning.)

On the up side, the game allows players to modify their stance at the plate by moving their feet, the sound effects are outstanding and there are plenty of stats, courtesy of Stats, Inc. for the Manage-Only Mode.

The game also carries an MLBPA license, so most of the players are there, but there's no deal with Major League Baseball, so the uniforms and team logos are missing.

EA keeps getting closer in its attempts, but they have yet to slam the ball out of the park. **B** *(Bill Kunkel)*

TECH SPECS

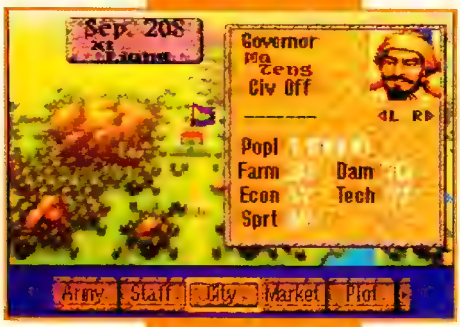
PUBLISHER: EA Sports
SYSTEM: Genesis
THEME: Baseball Sim
MEGABITS: 16
PLAYERS: 1-2
LEVELS: N/A

BIG TROUBLE IN VIDEO CHINA

Romance of Three Kingdoms IV *Creates a Wall of Warlord's Fire*

No one ever thought, when Koei began the saga of the era in China's history known as **The Three Kingdoms**, that it would extend through four great epics. The tale presents the history of the second and third centuries of China, in a simulation that casts the gamer as a warlord, set to conquer China's 43 cities.

TECH SPECS



Players who've followed the bloody tale through the first three Koei games know they're in for another great historical simulation of an era shrouded in romance and intrigue. They'll not be disappointed; the latest game is true to its predecessors, yet incorporates new bells and whistles.

The warlord must triumph through six scenarios, engagements that occur between 189 AD and 235 AD. This period is filled with civil turmoil and uprisings by regional rulers.

The gamer must oversee all the affairs in the kingdom, including city affairs and their productivity. The cities provide provisions for the armies, so the civil service is just as important as warmongering. Once the cities provide enough resources, the goal is clear: Declare war on a neighboring city and go into battle. Conquer to gain territory; defend your holdings against other warlords, and the game will end with glory. Otherwise, prepare to be conquered.

The graphics are improved over previous versions. The maps are brighter, the text is clearer and the on-screen animations provide tidbits of ambience that helps bring the simulation to life.

The player has a wealth of resources to draw on, including 450 officers, plus a generator to create personalized officers. There are new weapons and fresh abilities (like setting things on fire; that really shakes up an enemy!).

Romance of the Three Kingdoms IV: Wall of Fire provides intrigue and history, in a struggle that continues its high standards. **B+** *(Joyce Worley)*

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BATMAN, WHATEVER



The Adventures of Batman & Robin
Carry on an Infamous Tradition

TECH SPECS
PUBLISHER: Sega
SYSTEM: Genesis
THEME: Action
MEGABITS: N/A
PLAYERS: 1-2 **LEVELS:** 7

Since Bob Kane created the Caped Crusader in 1939, Batman has become a mainstay of popular culture appearing in every media from radio shows to live-action movies and since the 1980s, five or six video games. Unlike some of those properties, the video games have never been better than B or B+ titles. **The Adventures of Batman & Robin**, not based on *Batman Forever*, carries on that lackluster tradition.

Guiding Batman or Robin, the player sweeps Gotham like a side-scrolling streetcleaner, eliminating bad guys in the employ of Gotham's usual suspects. There's little variation between the two; Robin has some different moves, but they're essentially the same.

Undistinguished music and undistinguished graphics keep **Adventures** average. Also, the game play becomes excessively slow in Two-player Mode when both characters are on the screen. Players who hope to someday see a great game based on these characters may end up waiting for Batman, forever. **C+**
(John Wesley Hardin)

PLAYING PULP FICTION

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TECH SPECS **PUBLISHER:** Sega **SYSTEM:** Genesis **THEME:** Action **MEGABITS:** 24 **PLAYERS:** 1 **LEVELS:** 5

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DEATH BE NOT PROUD

In this Action RPG, the Iron Angel *Must Meet His Maker—Or Die!*



The cyborg's name is Tetsujin, but is he the hope of the world, or the world's worst nightmare?

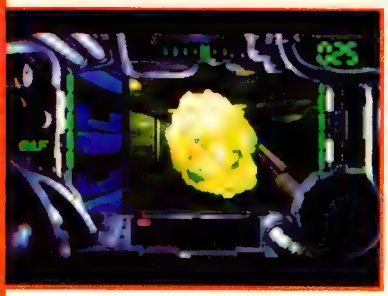
Tetsujin wanders the mazelike corridors of a huge building, cyborg body honed to deal destruction at a moment's notice. The quest is simple, yet seems almost impossible—to destroy all of the mechanical killing machines, the motoids, that stand between Tetsujin and the mad-genius scientist who created him. This mad scientist designed a way to meld metal onto flesh and made Tetsujin Death itself, with a human heart deep within metallized flesh.

Iron Angel of the Apocalypse takes some tried-and-true (some might say tried-and-overtried) game mechanics from the semi-VR school of **Doom**, **Castle Wolfenstein** and **Marathon**, and melds them into a different kind of narrative story. It's backed by subtitled Japanese voices within a *film noir* collection of full-motion video clips that tie each stage together.

The idea of an action role-playing movie is inviting. Full-motion video (FMV) is now being explored by many publishers. But in this game the FMV is used only between stages of animation routines with a few short clips during play. The box copy says, "You watch a movie to whose outcome you contribute." We disagree. This game won't satisfy anyone looking for an interactive movie.

Rather, each stage is set by a brief, narrative segment of a movie that is admittedly one of the best in video gaming. Director Kusakabe and actors and Synergy can be proud of those segments. But the real game happens in the corridors.

The game play is repetitious; the first-person perspective allows cyborg Tetsujin to run down corridors that all have basically the same texture and colorizations. The game generates a map as Tetsujin travels through the complex and winding corridors, and a map is hidden on each floor. Bullets, shields and turboboosters to increase speed can be picked up on the run.



Eight enemies stalk Tetsujin through the corridors. Walkers plod forward, tanks can ram or fire, one-footed jumpers fire destructive blasts. The basic enemies stay the same, but their abilities increase as Tetsujin explores higher floors.

Game play is enhanced by various weapons found on the early levels. These include a Gatling gun and the Big Heat gun; both have some very well-rendered graphics to mow down the motoids. When a motoid is hit, by the way, it gouts blood (or maybe red oil?) in the best of violence rated traditions. Tetsujin's guns cannot be raised or lowered but only aimed left and right, this results in less strategy possible during the many firefights.

It's possible to leave each floor as soon as an elevator is found, but that strategy makes it impossible to win the game. The idea is to get to the top of the building to confront the scientist. That's not nearly as straightforward as it might seem because the building is not only a collection of mazes on each floor, the way up is itself a three-dimensional maze!

No stage should be left until the map for that floor is found. The Scrolling Map Screen indicates where all the elevators are on each floor. Sometimes to go up, it is necessary to first go down to an elevator that is not reachable via its own stage.

The real fun of the game begins when the cyborg reaches the higher floors. The stirring music, the fitting sound effects and the video clips will help sustain gaming interest.

Although the game does repeat many familiar aspects, there is a feeling about being Tetsujin, of clambering in an unknowing way through a complex maze to an unknown destination, that makes this game its own unique experience.

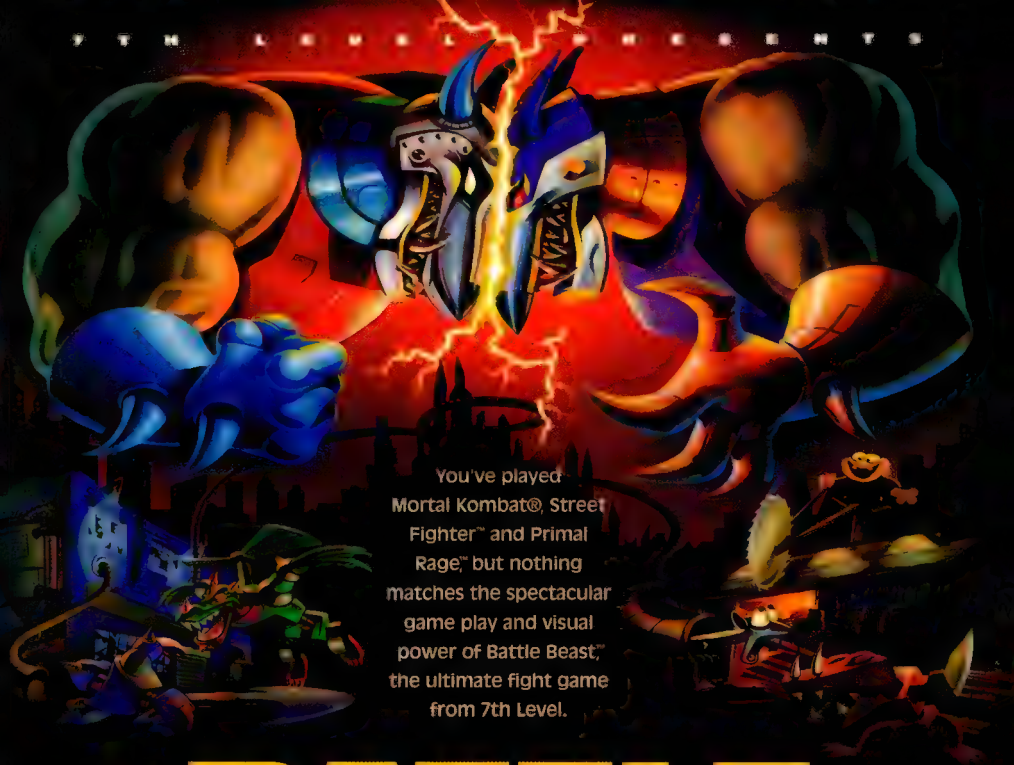
Iron Angel is a worthwhile and challenging first-person, virtual-reality game with a surprising plot and interesting logical puzzles included.

But for those looking for a full-motion video movie game, this isn't it by a long shot. **C**

(Neil Shapiro)

TECH SPECS PUBLISHER: Synergy SYSTEM: 3DO PLAYERS: 1 LEVELS: N/A

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"... the great British sense of irony keeps the writers' tongues in their cheeks throughout ..."

DREDD LOCK

A Fascist Role Model for the '90s, Judge Dredd *Lays Down the Law*



Judge Dredd is among the coolest antiheroes in the comic-book pantheon, the ultimate fascist's wet dream. This character, clad in thickly soled black boots, a black leather costume with grotesque golden epaulets and a helmet complete with a shaded visor, is the final power in his environment. Remote, merciless, we never see his face as he impassively deals out justice.

In Dredd's futuristic world, the police are empowered to the point where they can not only arrest felons, but sentence them as well, on the spot. While Dredd never abuses his police state power, he is certainly no bleeding heart, either. The cinematic and gaming possibilities seem endless

Let's hope that the film version does more to explore its potential than this pair does.

Judge Dredd on both 16-Bit systems is basically a maze-exploration shooter, with plenty of enemies for Dredd to deal with as he checks out the territory. Features of interest include 10 different weapons, from the Lawgiver to ricochet missiles, 12 levels (comprising 28 missions); a variety of power-ups and the option to arrest or erase lawbreakers. Dredd also has hand-to-hand combat techniques for disarming felons.

The two versions of the game are very similar, but the SNES edition is clearly superior in every way. For one thing, the graphics, while a good distance from being eye-popping on the SNES, are a lot cleaner than we get on its Genesis cousin, where the visuals are so muddy that it's often difficult to track Dredd against the dark backgrounds. Felons seem willing to surrender to arrest on the SNES version; busts in the Genesis version can be a genuine ordeal, with most felons exploding long before they can be taken into custody. The SNES version also offers nice bells and whistles such as the driving rain that confronts the player-character on the first level and the excellent, heroic score. The music on the Genesis version is instantly and utterly forgettable.

The mapping, while superficially similar, is also different from version to version. Some areas that are all but impossible to reach on the SNES edition, for example, are easily accessed on the Genesis SKU. Of course, there's more blood in the Genesis version.

The game play is pretty simple: Dredd moves through a series of mazes, arresting and/or executing lawbreakers as he moves along. Unfortunately, once all the criminals are used up, there's nothing for Dredd to do but find the way out, which can be an endlessly tedious process. Finding one's way around can also be a challenge; some locations seem like cul-de-sacs, but there's usually a disguised ladder on the floor somewhere.

There are also some problems with the character control. For example, if the player moves the direction pad downward, Dredd goes into a crouch. Return the pad to the neutral position, however, and he remains in a crouch, it is actually necessary to move the direction pad up in order to return him to a standing position. The game also uses the increasingly popular double-tap technique to get Dredd running either to the left or right. Given that the game makes use of a six-button controller on the Genesis, it's amazing that an individual command for running wasn't made available to players.

Then, of course, there's the greater issue of Dredd as an inappropriate role model. The idea that kids should admire the exploits of a character who is the complete antithesis of everything democracy stands for, is a difficult notion. It's made more palatable by the great British sense of irony that keeps the writers' tongues in their cheeks throughout most of the comic-book scripts.

Unfortunately, in this game he's just another scrolling nonentity. Just when it began to look as if companies were going to try a little more imagination in licensed properties, **Judge Dredd** arrives.

The sentence: Retail Death!

Genesis C-, SNES C *(Bill Kunkel)*

TECH SPECS

PUBLISHER: Acclaim
SYSTEM: Genesis & SNES **THEME:** Shooter **MEGABITS:** N/A **PLAYERS:** 1
LEVELS: 16

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SPACE REGRESSION

Shadow Squadron *Gets Lost in* Star Fox's *Shadow*



Ever since the 32X was first released, Sega users have been screaming for games that justify the purchase. Disappointment has been the theme, unfortunately, much as it was with the Sega CD.

Shadow Squadron attempts to make things right by showing off the system's ability to generate shaded polygons; unfortunately, the game itself is still not up to the level of, say, **Star Fox**, a 2-year-old SNES product. The game is much too short and far too easy. For example, if the player selects the ship *Feather* 2 on autopilot (which more or less keeps the game rolling on a track with the player doing nothing but firing weapons at the various polygonal enemy spaceships), the game can be played through in about 15 minutes, with a score upward of 50 million. There are only six levels, a scandalously small game.

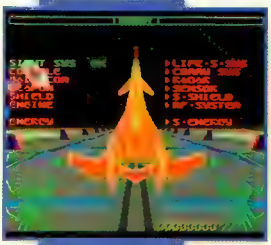
Except for Level Three, which features an asteroid belt, each level brings the player's ship closer and closer to an alien sun with remarkably little background graphics. Most of the time, the player sees nothing but the sun, growing ever larger, against the vast void of space. The enemy ships offer little return fire, while the vulnerable points on the huge alien craft are actually highlighted in grey, making it easier for players to hit them.

The explosions are truly spectacular, probably the single best feature of the game, but is there anyone out there who will pay $50 for cool explosions? Those players who get bored with the milk run-like play available on autopilot, however, can always opt to fly the ship themselves, which makes the game slightly more difficult. In fact, it makes the game so hard that it becomes almost unplayable beyond the early levels. Once the player's ship is taken off the rails, the action becomes so hot that the phrase "happy medium" is sure to ring through gamers' heads.

One of the game's more interesting features, however, is its "Trace" Option. This display offers gamers a replay, from a new perspective, of their entire mission so far. The two ships available to the player—*Feather* 1 and *Feather* 2—are equipped with different weaponry, though the missions are the same (however, the level end sequences are different). *Feather* 1, in fact, is equipped with something called "Guided Laser Torpedoes," which strongly resemble the missiles that are fired in **Panzer Dragoon** on the Sega Saturn. *Feather* 2, meanwhile, has an Energy Torpedo that basically whites out the screen. Finally, gamers can select the colors of the enemy ships—a good idea when attempting to spot dark blue motherships against a black background.

Most players agree that the use of polygons is impressive in this game, and **Shadow Squadron** offers some play features never available before on the Genesis. But it's a shame that the designers couldn't put the technology to more creative use. **B-** *(Bill Kunkel)*

TECH SPECS



PUBLISHER: Sega
SYSTEM: Sega 32X
THEME: Air Combat
MEGABITS: N/A
PLAYERS: 1
LEVELS: 6

IT'S A RAID!

If You've Ever Wanted to Walk in a Cockroach's Shell, Bug! is For You

TECH SPECS

PUBLISHER: Sega
SYSTEM: Saturn
THEME: Platform
MEGABITS: N/A
PLAYERS: 1
LEVELS: 7

RIDGE RACER SPEEDS HOME

The PlayStation Version of Ridge Racer *Nearly Beats its Arcade Brethren*

The driver's time trial has placed him last in the pack, but the brightly colored tails of several racers don't block the view of the access ramp. A swimsuited billboard girl crosses in front of him with a sign that says, "Novice." An amplified voice calls the countdown.

Suddenly the cars ahead are diminishing; the driver crams the accelerator and the view swerves a bit. Then surrounding structures are flashing to either side as his vehicle belatedly begins its attempt to catch up with those who are already disappearing onto the main courseway. Turns come thick and fast. At the rate he's moving, it's hard not to oversteer; he finds himself swerving from side to side, trying hard to keep between the flashing white dashes of the center lines.

A tunnel approaches, the diminished lighting within seeming orange by contrast. As he enters, the howling of his engine takes on a slight echo.

Back in daylight, a helicopter hovers close overhead, turning; he's under and past it in a moment. He's almost caught up with a yellow car when it swerves in front of him. They bump and it rockets ahead in a partial spin, but recovers and is once again well ahead. Neither he nor the car ahead seems to be any worse for the wear. ...

Here's a popular coin-op racing game taken forward several steps to fit the capabilities of the PlayStation. Players coming to it from any of the 16-Bit consoles will be thrilled and exhilarated at the advanced realism of the racing experience. So much so, perhaps, that soon the player will seriously wish for a steering wheel, pedals for accelerator and brakes, and possibly a shift lever, instead of the PlayStation's button controller.





TECH SPECS

PUBLISHER: Namco
SYSTEM: PlayStation
THEME: Auto Racing
MEGA BITS: 4
PLAYERS: 1
LEVELS: 7

The graphics, rendered in textured polygons, give a colorful, realistic style to the intricately designed landscapes surrounding **Ridge Racer**'s track. While driving, it is possible to switch the view from just in front of the car (apparently at about hood ornament height) to slightly above and sufficiently behind to see the whole car in the foreground. After the race, a full replay will be shown as though from cameras in a number of moving viewpoints—presumably from one of the helicopters seen during the race, although some of the images are from inside the tunnels as well.

There are four cars to choose from in the initial setup, marked with various names such as Namco and other in-house references. Across the top of the windshields is the name "Galaxian"—harkening back to one of the company's great successes. A neat note—on the Title Screen is a playable miniversion of **Galaxian**; clear the ships and extra cars will be available! There are 13 altogether, but most are only available after winning many races.

Other options during the setup include picking variations on the track (a 3-D layout revolves on the screen, with number of laps and maximum speeds indicated; the layout will also vary somewhat), selection of manual or automatic transmission and sounds—a choice of six "asphalt kicking" musical tracks plus a random selection. Or, after the game is loaded, the player may insert an audio CD for a custom soundtrack.

Ridge Racer is an improvement over the smash arcade hit in terms of features, and in the end really only needs improved driving control options to give its coin-op brother a real race.

B+ *(Ross Chamberlain)*

CREATE A CELTIC DYNASTY

Celtic Tales *Brings Early Ireland Back to Life*





Celtic Tales: Balor of the Evil Eye, won't actually teach players too much about the Celts, but they will learn the fine art of diplomacy as they try to unite the tribes of Ireland against Balor and his army of Fomor people. It's a long march from a tiny province at the beginning to an all-out war with the troglodyte megalomaniac on his Tory Island.

Replayable many times over, the gamer starts in a province, then controls a ruler and champions over simulated time until the Eire is under control

When **Celtic Tales** begins, the Goddess Danu presents a group of picture icons from which the game's ruler must be chosen, each commander of a different home province. Over time, champions align themselves with the ruler and new provinces join forces with the ruler due to smart diplomacy, bribes or battles A number of champions are present in each province at the game's beginning, for the player to command to farm, mine, cast spells or explore, depending on the current needs of the province. It's tough to start from scratch like this, but players really appreciate their success after it's been earned hard-fought every step of the way.

Although the events are different every time a player starts a new game, there is an overall linearity just under the surface. The first goal is to unite all of the tribes of the Eire under one ruler. This may take years of game time, but no more than 70 years may pass before Balor gets the island for himself by default. Most experienced strategy players are able to finish the game and beat Balor within 40 years. Once the provinces are united, the player becomes the High Ruler. A battle with Connan, Balor's second-in-command is next – success is the only option. If a player loses to Connan, the game is over. If successful, Connan relinquishes the Gae Bolga, his special spear. Upon Connan's defeat, Balor himself appears and whisks the High Ruler and strongest champions off to Tory Island for the climactic battle. These last two battles are meant to leave the player with an enormous feeling of satisfaction, but if either is lost, the game is over That's quite an incentive to play smart, since it may take weeks of preparation to get that far.

TECH SPECS **PUBLISHER:** Koei **SYSTEM:** PC CD **THEME:** Strategy/Simulation **HD SPACE:** 43MB max **PLAYERS:** 1-4 **LEVELS:** N/A



The main game screen brings to mind **Populous** and other strategy games that take place over an expansive map. The main window contains a three-quarter perspective view of the province surrounded by a number of command buttons and counter icons on the sides and top respectively. A click on the compass in the lower-left corner of the Interface Screen reorients the province, but it's almost unnecessary since almost all of the province and its champions are visible from any angle. The top of the screen depicts the province's resources like wood, metal, cattle and grain. At a glance, this information shows how successful a province has been to date. Command buttons leading to further menus and subscreens flank each side of the picture window. Although it's annoying that the designers chose to orient the words vertically on the buttons, after a few turns players will become used to this.

Each province is a living, breathing world unto itself. This setup makes it easier to develop each province to its best potential, but it also isolates them enough that they don't even feel like part of the same game. Unlike other strategy games of this type, players cannot scroll the picture window to bring up another province, and the provinces themselves don't seem physically connected beyond their loyalty to a particular ruler. This said, players must concentrate their efforts on the buildup of resources, power and culture in the current province. They also must send champions to explore other provinces to discover if they are occupied and if their people are friendly.

Within each province, players see icons in the picture window for a citadel, burg and a champion tent. Animated characters representing each of the champions in that province also tend to their work as last commanded by the ruler. Some champions wander into a province during a turn and go to sleep. Others work hard at farming, mining or cattle herding. Each game turn consists of an orders phase and an action phase. During the orders phase, players examine their provinces, assign tasks to their champions and visit the citadel, burg or champion tent for more substantial actions like war, or building up the burg or citadel. The burg represents the culture of the province and the citadel represents its power. From the burg, players can discover the results of a monthly poll of the province's people, as well as move a champion to another province or initiate trade. In the citadel, players can start a war, pay tribute to a neighboring province (i.e., kiss their butts so that they'll join up) or start a cattle raid. Although someone may win **Celtic Tales** through war, it is more difficult than the path of trade and tribute.



Rulers must also increase the skills and experience level of the champions under their control. These may be warriors, bards or druids. Bards and druids can cast spells, but warriors make up for this with battle skills.

Druids and Bards learn spells in the champion tents in each province. The tents are also a source of new champions, but champions will not join a ruler whose experience is less than theirs.

The graphics are detailed and clear, from the little animated characters performing their tasks to the information screens. The impressive introduction is good once, but a waste of 20MB of hard drive space after that. Sound effects are quite good, but this is not a game where sound effects matter much. The music has a much more impressive effect because it is regal and rousing yet gets tiresome too.

"The impressive opening introduction is good once, but a waste of 20MB of hard drive ..."

Celtic Tales is an interesting and captivating game with only one major flaw. The ruler is nothing more than a champion marked as a ruler. That person can do everything else a champion can, which creates a disconnect within the game since the player is supposed to be the ruler. The designers should have randomly scattered the champions, without a chosen ruler. **Celtic Tales** is even more complex in multiplayer games, in which up to four take turns at the keyboard.

Celtic Tales' structured format delivers a nice blend of combat, adventure, management, magic and "command and conquer" goals. **B** *(Russ Ceccola)*

CAMELOT REVISITED

Role Play as Oliver Stone and Re-write History the Way You Want it.

This first-person sim drops the player smack in the middle of the Oval Office one day after a failed assassination attempt in Dallas and boy, has Jack got troubles: Vietnam boiling, protesters screaming for civil rights and general unrest in the air.

Re-elect JFK is an oddball combination of strategy game and whodunit. The first challenge is to make tough decisions about Southeast Asia. Then there's the Civil Rights Act of 1964, sure to die in Congress without presidential support. Finally, there are two assignments that ultimately decide whether you win or lose the game—getting re-elected to a second term and learning who was responsible for the shooting in Dallas.

This sounds a lot more exciting than it actually is. A day in the life of the president involves meeting with adviser after adviser, listening to their opinions and then making decisions. That may reflect reality, but it's not much fun. It would've been a thrill to revisit Camelot and actually deal with the famous personalities of the day. But, instead, Re-elect JFK plays more like a game of Clue. Instead of determining whether J. Edgar Hoover or Lyndon Johnson were involved in the assassination plot, all the suspects are fictitious. Might as well have cast Colonel Mustard as the vice president or Professor Plum as the FBI director.



The real stars are the impressive graphics and the easy interface. Various digitized actors speak their minds; then players choose responses, heard in a fair approximation of JFK's voice.

JFK always finds time to do detective work on who took a potshot at him on that hot day in Dallas; that's the crux of Re-elect JFK. But any wrong move can turn public opinion against the president. The approval rating forces players to think like they were back in 1964. For example, when black leaders invite JFK to speak at a civil rights luncheon, players must anticipate what this will do to his popularity. Not the most politically correct game in the world, not by 1993 standards. **C+** *(Paul Hyman)*

TECH SPECS

PUBLISHER: Quadra **DEVELOPER:** Viking
SYSTEM: Win/Mac CD
THEME: Political sim **HD SPACE:** 2MB
PLAYERS: 1 **LEVELS:** N/A



THE TRUTH IS UNDER THERE!

Aliens Inhabit Our Seas in X-COM Terror From the Deep

Last year, **X-COM UFO Defense** quickly soared up the chart of computer game sales Rather than mess with a formula that worked, MicroProse found a way to satisfy its fans without a radical change in game play or a rehash of the same scenarios. They simply switched the location of the game turns and used almost identical game play to create **X-COM Terror from the Deep.**

Terror involves a brand-new set of graphics, sound effects, alien races and alien base design. In this scenario, the player uses X-COM to patrol underneath the ocean after the defeated aliens from the first game reach across the galaxy to their long-dormant underwater brethren and demand their help in the destruction of humanity. Players must shoot down alien vessels and explore their interiors to learn about them, and defeat them little by little until they discover enough information to take out more substantial installations.

MicroProse graphically enhanced **Terror** with undersea topographic detail and included geoscape mapping to explore the depths. Water coloration and human shipwrecks act as a background for the constant alien confrontations. The game is meant for strategy buffs who like to move men across an expansive playfield to explore while they stay alive in turn-based combat

The underwater setting brings new technologies (sonar, submersibles, etc.) and a large encyclopedia of alien mutations and standard sea creatures. Some players liked to learn about the aliens in the original game, not just defeat them, so that feature is greatly expanded.

Remember that water takes things up, not down, and it is dangerous to go into the deeper areas. Use all available options before rushing into combat.

Who knows where the aliens will appear next? Maybe right under our feet in the ground. **A–** *(Russ Ceccola)*

TECH SPECS

PUBLISHER: MicroProse
DESIGNER: MicroProse
SYSTEM: PC CD
THEME: Strategy
HD SPACE: Variable
PLAYERS: 1
LEVELS: N/A

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COMING THIS FALL

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VIRTUALLY BAD TO THE BONE

Nothing's Missing but the Smell of Cigar Smoke in Virtual Pool

Why in the name of Minnesota Fats has it taken so long to get a first-rate pool simulation onto the PC? One would expect a new pool simulation every holiday season.

Well, at least *this* year looks good; **Virtual Pool** is a spectacular piece that may, in fact, be so good that other developers will be reluctant to try and top it. **VP** is played from a true perspective, angled, not topdown, with the angle rotating after each shot in order to set up the best possible position. The physics of ball movement—the key to any good pool simulation—are perfectly reproduced. The graphics are downright elegant, and the sound is totally appropriate.



TECH SPECS

PUBLISHER: MicroForte
DESIGNER: Celeris
SYSTEM: MS DOS
THEME: Strategy
SPACE: 10MB
PLAYERS:
LEVELS:

There's Straight Pool, Rotation, 8-Ball, 9-Ball and General Rules, and any format can be played head-to-head (in person or via network/modem/serial cable) or against the computer.

Anyone with even a passing interest in this wonderful game will want to put **Virtual Pool** on their shopping list.

Rack 'em. **A** (*Bill Kunkel*)

POLITICALLY CORRECT WARFARE

Wage Fierce Ecological Combat with the Dreaded Jagged Alliance

Sir-Tech's **Jagged Alliance** is an entertaining role-playing game set in the modern era, with mercenaries and guns instead of paladins and swords. It gives the player command of a band of mercenaries attempting to protect rare tropical trees.

Good scientists learned the sap from these rare, supposedly non-reproducing trees, can create wonderful medicines. The bad scientist, formerly one of the good guys, decided he could profit more by exploiting the existing crop of trees rather than continuing research with the good scientists. Accordingly, the bad scientist and his mercenaries took over almost all of the island by force. The player must lead a crusade to eradicate them and regain control of the island.

The player hires mercenaries from an existing pool, each with the typical assortment of skills, attributes and gear. As some die, players can fly replacement mercenaries onto the island.

Each character can carry a finite amount of goods and weapons, but multiple-pocket combat vests let them carry more goods and weapons. During non-combat situations, players operate in real time and can move the entire group with a single mouse movement or dispatch individual characters in separate directions. During combat, each player moves individually under a turn-based combat scheme.

Characters have a "shortness of breath indicator" that decreases as action points are expended. Allowing them to rest one turn returns the breath indicator and action point allotment to normal.



The turn-based combat scheme revealed itself as a thorough, complex and flexible movement scheme.

Unfortunately, **Jagged**'s user interface suffers from mouse overload. A few additional hot keys here and there would help game play.

Jagged suffers from a few story oversights such as an "Air Force F-18 [sic] pilot." I hope no one tells the Navy that the Air Force stole an F/A-18. There are some other glitches as well. These include strange installation failures and frequent lockups that prove to drag the game down a bit.

In general, **Jagged Alliance** is an enjoyable and somewhat original computer game that is only strapped with a few minor oversights. The inevitable medicinal patch is anticipated. **B-** (*Tom "K.C." Basham*)

TECH SPECS **PUBLISHER:** Sir-Tech **SYSTEM:** PC CD **THEME:** RPG Combat **HD SPACE:** 20MB **PLAYERS:** 1 **LEVELS:** 60 Combat Sectors

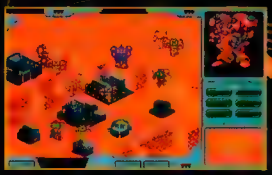
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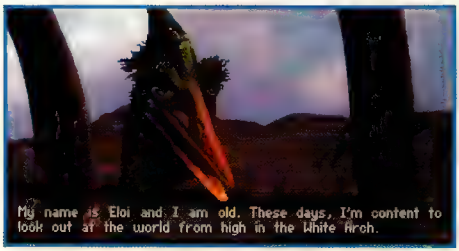


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PARADISE FOUND

Lost Eden *Rebuilds a Mythical Past*

The dream of interaction between humans and dinosaurs is thriving. Fans of imaginary worlds like James Gurney's *Dinotopia* and Harry Harrison's *West of Eden* will find appealing parallels in **Lost Eden**.

The player assumes the role of Prince Adam, heir to the throne. Mo is the last standing remnant of a great network of fortifications that once protected both men and dinosaurs from the depredations of the Tyrann, predatory dinosaurs banded into an army. The ultimate task of the player is to re-establish a system of citadels and break the power of the Tyrann. It really is irresistible for dinosaur lovers.

Both dinosaurs and humans are critical to the process of building new citadels: this theme of cooperation runs through the entire game. All action in the game is driven by the manipulation of a floating, rotating icon which allows the player to move, pick up objects, inspect objects and locations and interact with other characters. Possessions are kept and arranged as small icons on a bar bordering the bottom of the screen.

Every encounter features fluid, swooping animation and detail, and the character voices are superb. The lip-synching is done with animated and expressive lips on an otherwise motionless face, as in the early-'60s cartoon series. But this a minor complaint: touches like the torch-light effect when inspecting a fresco in the citadel's catacombs, are nothing short of jaw-dropping.

If there is a flaw to the game, it is in the structure of the adventure. **Lost Eden** is from the same producers as the **Dune** interactive CD-ROM adventure, and like **Dune**, **Lost Eden** plays like a novel with a very definite, linear plot, with only one solution to most problems. It is possible to lose by dying, but death doesn't seem to have any correlation to poor decisions.

This is a fascinating adventure on a grand scale. The designers did their best to satisfy the sense of wonder and deliver a thought-provoking story at the same time. **B+** *(Andy Hooper)*

TECH SPECS

PUBLISHER: V...
DESIGNER: C... Interactive
SYSTEM: P...
THEME: Adve...
HD SPACE: 1...
PLAYERS: 1
LEVELS: N/A

PC PUNCHER

Super Street Fighter II Turbo

Kicks and Punches a Path to PC

Let us presume that you are a PC owner. Now let us presume that you are a fan of street fighting games. Would you A) spend large amounts of money buying inadequate computer versions of popular coin-op fighting games? B) break down and spend $80 or so for a SNES or Genesis and buy versions of those arcade fighters? or C) play them at the local 7-11? If your answer was "A," then hop in your Hyundai Excel and blaze on down to your local software supplier, where you will no doubt find copies of Super Street Fighter II Turbo gathering dust on the PC CD shelves.



TECH SPECS

PUBLISHER: Capcom **DESIGNER:** Eurocom Entertainment **SYSTEM:** PC CD **THEME:** Fighting **HD SPACE:** 30MB **PLAYERS:** 1 **LEVELS:** N/A

SSF2T was released in arcades in response to player gripes about the slow speed of the long-awaited coin-op Super Street Fighter II. But by the time it arrived, the whole Street Fighter franchise was on the decline.

Eurocom Entertainment did a commendable job of translating a coin-op to the computer medium, but the fit just doesn't work. For example, to fit the documentation in the frontpiece of a crystal case CD holder, each fighter gets only one tiny page of text. The doc writers get a brief biography and descriptions of only two special moves (a few additional special moves are listed separately.)

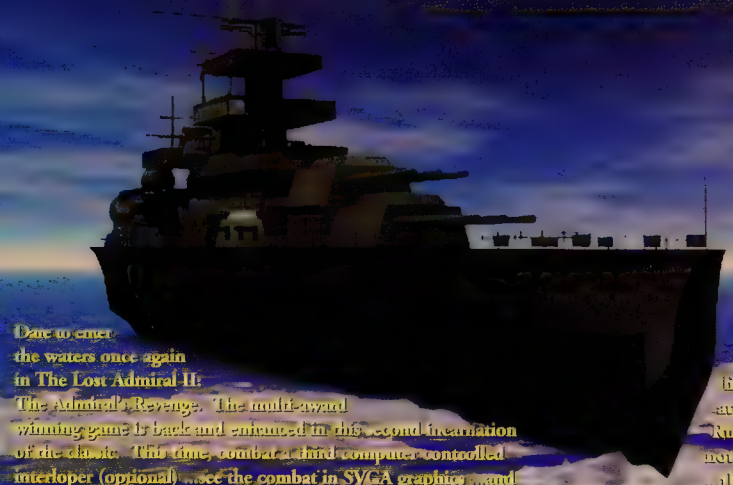
The game is essentially unplayable without a direction pad-style, six-button controller.

For those still interested, the PC CD version contains all the coin-op characters, along with Boss Akuma, who can only be accessed after defeating every other character. Any game enthusiast willing to painstakingly work at it will eventually reproduce some of the hot-looking moves that get these games over in the arcades. But this whole genre is such a duck out of water, it's tough to know why publishers bother to release them any more. **C+** *(Bill Kunkel)*

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THE LOST ADMIRAL II

The Admiral's Revenge



Dare to enter the waters once again in The Lost Admiral II: The Admiral's Revenge. The multi-award winning game is back and enhanced in this second incarnation of the classic. This time, combat a third computer controlled interloper (optional) ...see the combat in SVGA graphics ...and play against a human adversary over MODEM. Utilize the land troops as well as your naval fleet to combat the improved AI and try to regain your name.

The pre-designed maps are monumental, the randomly generated scenarios are tremendous and the campaigns round out a titanic gaming experience. Your progress is tracked all along the way with full player history tracking.

Stealthily, maneuver your submarines through enemy lines to prepare for the all out attack on your adversary. Run a tight ship, but it still will not be easy to conquer the world. ...this time it's not just personal ...it's a matter of life or death.

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YOW! Barely clearing the blast doors, the Slipstreamer yanks his machine into a hard banking turn and screams across the finish line. Thunderous applause caresses the pilot's ears as the crowd goes crazy.

Racing games are a cornerstone of the electronic entertainment arena. Nobody made better Amiga racers than Gremlin (**Lotus Turbo Challenge**) Interactive. The advent of Pentium computers makes possible a new level of sophistication, from complex simulations like Papyrus' **Nascar Racing** to Mindscape's extravagant **Megarace**. Never before has the computer game enthusiast had such a level of sophistication available to him/her to experience the thrills of high-speed racing from the comfort of his/her own computer station.

At the same time a resurgence of simple, but excellent, "fun" racing games has brought forth novelties like Williams' and GT Interactive's **SuperKarts** (an excellent game in its own right) and U.S. Gold's **B.C. Racers**.

But for the ultimate in sheer competitive exhilaration you'd be hard pressed to find a better entry than Front Street Publishing's release of Gremlin's **Slipstream 5000**—a racing game designed for the flight sim junkie in all of us.

SS5K is a fast and furious 3-D racing game set in the near future, where the advent of anti-gravity technology has created a new form of sport flying.

Players choose from a field of 10 vehicles and drivers whose multiethnic diversity would make any World War II movie sergeant proud. From the Native American Shaman to identical twins Kin and Gin Matsu, the drivers are as unique as their machines adding a nice, diverse touch to the game in a sometimes white male-dominated genre in gaming

"Unfortunately, it won't take long for most players to complete the season."

Player options begin with a choice of single- or multiplayer games. Multiplayer games are available for two players on a single computer with a split-screen display or through a full-screen serial, modem or network connection.

Single-player games offer Practice, Single Race and Championship Modes before moving on to pilot and machine selection.

Then it's out to the hangar to outfit the machine. First-time competitors start with a paltry $750, barely enough to buy a low-end weapon or targeting system, but cash is won by finishing in the first six positions and by nabbing any cash tokens found along the track.

Other on-track items include speed boosts, instant engine and control damage repair and the dreaded Disruptor, which will reverse all control inputs for several seconds. The drone ships release the same random items, but when things get really desperate, simply flying through one of the Re-Charger Pits will easily set all systems right again.

The 10 Championship courses are gorgeously rendered in texture-mapped 3-D: Egypt, Arizona, Chicago, the Amazon, London, Norway, Paris, Hawaii, Tokyo and New York.

Before each race commentators Lyall Mint and Crystal Eyes narrate a flythrough of the course and outline simple strategies. Pay attention, because there are no brakes in the Slipstreamer's world—you're either accelerating or coasting—and collisions can get pretty costly. After the race a replay of the entire event can be watched from any of the five available views.

Unfortunately, it won't take long for most players to complete the season, after which the replay value diminishes rapidly. Still, it's fun while it lasts, and the game does come with two unusual extras: a simple but comprehensive manual and a bonus audio CD that features two tracks from **Skid Row**'s latest album CD. **B** (*Scott Wolf*)

TECH SPECS



SPACE QUEST 6

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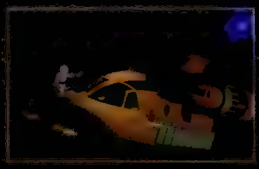
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MONTY PYTHON REVISITED?

DiscWorld *Features British Humor and a Scaly Dragon in One Package*



In the '70s and '80s, millions of impressionable American kiddies tuned in to PBS to watch a twisted Monty Python butcher conventional reality. Psygnosis' **DiscWorld** sustains that brand of humor, as it brings Terry Pratchett's bizarre *DiscWorld* novels to life.

DiscWorld is a world shaped like a disc, perched on the backs of four giant elephants that stand on the shell of Great A'Tuin, an enigmatic star-traveling turtle. In the center of the world is the city-state of Ankh-Morpork, where most of the action takes place. This precarious existence may explain the hilarious fatalism of the characters in the game.



The game is based loosely on the plot of Mr. Pratchett's *Discworld* novel number eight; *Guards! Guards!* A convocation of ambitious scum conspires to steal a magical dragon-summoning tome from the Unseen University Library in Ankh-Morpork. The group calls a dragon from its plane of existence to terrorize the inhabitants of the city. The lower-class schemers hope to overthrow the benign tyranny of the Patrician, the leader of Ankh-Morpork.

After denying the existence of the dreaded serpent and ignoring the incinerated corpses lying about, the Patrician calls on the Archchancellor of the Unseen University. Threatened with the loss of his academic grant, perennial wizardry undergrad Rinsewind (the player) is tapped to solve the mystery of the appearance of the dragon.

Rinsewind must now actually *do* something other than get drunk and sleep. (University life is similar in all realities.) Not a very diligent student, he must familiarize himself with the occupants and environs of UU. The faculty sits around drunk in the dining hall gorging continuously. The library is run by a wizard who was turned into an ape and refused to be turned back into a man because he liked running about with no trousers. Overseeing this motley crew is the martinet of an Archchancellor.

With his luggage (a semi-sentient, ambulatory suitcase), Rinsewind departs from the not quite ivory towers of Unseen U in search of the skills to rid DiscWorld of the scaly scourge.

As with most graphic adventures, the player should: talk to everyone met, take or steal whatever's not nailed down and go to all accessible areas. Most of what the lackadaisical citizens of Ankh-Morpork talk about seems at first blush utter nonsense, but as the game progresses their funny ramblings become quite pregnant with important meaning.

All interactive items are clearly labeled, which saves time hunting about. The articles that can be picked up should be deposited in the infinitely voluminous Luggage. Immovable objects are to be remembered because most of them will attain greater significance later.



After the first act, the librarian gives Rinsewind access to L-Space. This is a limited form of time travel created when a large number of magical books are brought together. The L-Space doorway allows Rinsewind to skip from the present to 12 hours in the past. He can carry objects and knowledge to and from the different times to accomplish his mission and crush the conspiracy.

The puzzles in **DiscWorld** range from hard to extremely hard. Most of the solutions make perfect sense in retrospect, though the clues seem tenuous at best. The instruction manual is a good intro to the DiscWorld milieu.

The fanciful, cartoon-like graphics add to the fairy-tale ambiance. **DiscWorld** goes out of its way to make fun of the fantasy genre, bureaucracies, college life and pretentiousness in general. Rinsewind's pithy lines are given voice (CD-ROM only) by ex-Python Eric Idle, a master of sarcasm.

The game crashed once in approximately 100 hours of play and a few voice tracks were missing or truncated, but all in all it's really a well-crafted game.

DiscWorld is a thoroughly engaging and absorbing graphic adventure with amusing characters and dialogue. It's one of the cheapest per-hour forms of entertainment around! **A-**

(David T. Harris)

TECH SPECS

PUBLISHER: Psygnosis DESIGNER: Perfect
SYSTEM: Amiga NO. OF DISKS: 4 CLICK PLAY/SAVE: 1
LEVELS: 4

Beautiful
WOMEN

Brave
SPACE PIRATES

Outrageous
ADVENTURES...

(Did We Mention The Beautiful Women?)



A new face. A prosthetic firearm. Impenetrable skin... You're ready to party!



One action-intensive RPG– containing pl thrilling twists and



Relax dude. It's a photograph. Until you meet the lovely Ma and her bikini clad friends in El

MATURE M AGES 17+

Slapped with an M rating (Excellent!) THE SPACE ADVENTURE™ fuses 3D and 2D exotic underworld filled with intriguing mysteries, exciting Japanimation, unyielding role-playing adventure and yes, plenty of beautiful women.

If not for the enormous bounty on your head, this game would be true paradise.

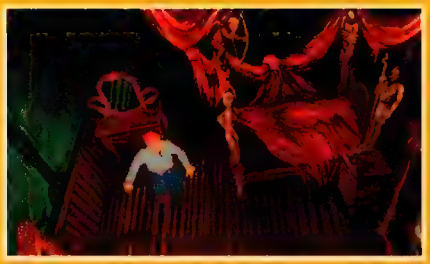
THE SPACE ADVENTURE™

SEGA CD

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ALONE AGAIN

Is Edward Carnby Left Alone in the Dark *as the Trilogy Concludes?*

Alone 3 opens in July of 1925 with supernatural sleuth Edward Carnby receiving yet another call for help. It's Greg Saunders (father of Alone 2's Grace) on the phone: The entire cast and crew of his latest picture, *The Last Ranger* has mysteriously disappeared, including Carnby's associate Emily Hartwood. Before he can say "$1,200 plus expenses," Ed finds himself in Slaughter Gulch, where the words "Ghost Town" are more than just a village motto.

At first, the opening reeks of the zombie combat overkill of Alone 2. But Alone 3 reveals a craftier side whereby many armed encounters may be avoided altogether. Meanwhile, the plot, involving Native American mysticism, a plan to drop California into the Pacific Ocean by dynamiting the San Andreas Fault and a guy with a robotic Abraham Lincoln suit, is secondary to atmosphere and play.

TECH SPECS

PUBLISHER: I-Motion
DESIGNER: Infogrames
SYSTEM: PC CD
THEME: Adventure
HD SPACE: 35MB
PLAYERS: 1
LEVELS: N/A

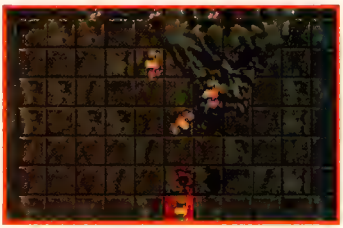
The control system is the same, but this time players may customize the difficulty by adjusting Carnby's life and hit points, as well as hit points of the bad guys.

The most interesting aspect of Alone 3 is the death of its main character. There is no way to avoid Edward Carnby, Esq., snuffing it at the hands of an evil spirit. Fortunately for Ed, he has Navajo magic working and he is reincarnated as a mountain lion long enough to fight with some werewolves.

Alone 3 is a satisfying game. The disconcerting camera angles were toned down, and while the logic of some of the puzzles is questionable, the continuity of characters from Alones 1 and 2 lays the foundation for a challenging and yes, creepy experience. **B+** *(Scott Wolf)*

BLOOD SPORT

It Takes a Strong Player to Survive the Outrageous Blood Bowl



No gridiron game comes close to the carnage of **Blood Bowl**. This multimedia version of the Games Workshop hit features all the rules of the game, but eliminates much of the mechanics so players can concentrate on strategy. The goal is to score the most touchdowns, but players use dirty moves, punches and sacks by the teams' monsters to reach the end zone. They don't call it **Blood Bowl** for nothing!

The game comes with eight teams from the board game and a lot of free agents. Each monster has skills for movement, strength, agility and armor.

Although players must choose an offensive or defensive formation before each play, they can give the team members movement commands until they end their turn or a significant event like turnover, touchdown or death.

The game's main view of the grid uses an overhead view, with side perspectives during special replays. A zoomed-out Sky-Eye Blimp Cam shows the whole field, although almost all of the grid is visible on-screen anyway. An interface of picture icons and clickable players on the field keeps **Blood Bowl** simple, so even those players of the board version who just got a computer can jump right in.

Blood Bowl's colorful, cartoonish graphics emulate the style of the original game's box. Sounds include basic music and bone-crunching effects during game play. The voice files feature commentary from gruesome announcers, plus many more audio treats.

One big problem with **Blood Bowl** is the mouse speed. It is set *very* low so players have to pick up the mouse to move the cursor. Keyboard equivalents of some game functions are nice, but the mouse speed snafu detracts from an otherwise enjoyable and challenging game. **B–** *(Russ Ceccola)*

TECH SPECS



IT'S WHAT TV WAS INVENTED FOR...BUST A MOVE!



Bust-A-Move is the new puzzle solving game that will have you busting for hours. Line up three of the same color balloons and bust them before they come towering down.

You can play alone or split the screen to bust a friend. There's even a handicapping option so the whole family can play. Find out what TV was invented for and Bust-A-Move!

TAITO

Taito America Corporation

WHAT'S REAL?

Truths & Fictions *Explores Borders Between Reality and Invention*

The ability to alter photographs with computer technology calls into question the idea of the photograph as a reliable representation of reality. Some photographers are horrified by this change; others embrace it and use it to expand the range of their art. Such a photographer is Pedro Meyer, the Mexican artist responsible for **Truths & Fictions: A Journey from Documentary to Digital Photography**.

Meyer's work focuses on the interaction of photography with digital technology. With each of his images, and their seamless alterations, the viewer must wonder where truth leaves off and fiction begins.

The Main Menu presents four options: Introduction, Gallery, Digital Studio and Correspondence. The Introduction is a QuickTime movie that suffers from the usual image quality problems. However, it is colorful, interesting and sets the stage for the exhibit to come. Meyer's narration is a thoughtful musing about the pace and effect of technological change, the question of trusting images and the change of consciousness that changing technology entails.



The center of **Truths & Fictions** is the Gallery, a display of 92 of Meyer's works, most digitally retouched. Viewers can wander straight through the gallery, use an index of images to go straight to any desired photograph, or take a guided tour narrated by American photographer and educator Jonathan Green. The reproduction of the images is clear, and all may be viewed at full-screen size. To see them in color requires a computer capable of displaying thousands of colors, otherwise the color photos will be displayed in gray scale. The images occasionally suffer from artifacts of digital reproduction, but in general they hold up well.

About one-third of the images were taken in Mexico, while the rest are from the U.S., primarily the Southwest. The contrast between the two sets of images is striking.

Twenty images are examined in the Digital Studio, the most remarkable part of **Truths & Fictions**. Using a little camera icon, one can move from each such image directly to the explanation and back, or explore all 20 images in Digital Studio. Meyer presents the original photographs, each of which may be viewed at full-screen size, and explains what he did and why.

Correspondence presents the commentaries of 87 artists, photographers and writers from 17 different countries on issues raised by his work. One can view an image of the original form of each letter, and many have accompaniments, including images, sound recordings and QuickTime movies.

The well-designed interface is easy to use. The help icon brings up an audio explanation by Meyer, some may prefer to have this in a text format.

There are a few technical flaws to bring down the performance of the disk. The cursor changes shape to indicate what action is available, but on occasion these shapes are misleading or wrong. Frequently, when linking from an image in the Gallery to Green's narration, the sound cuts off before it should.



"Meyer's work focuses on the interaction of photography with digital technology."

Veronica Volkow, a Mexican novelist and poet, managed to successfully sum up the issues in her letter to Meyer. "With the digital revolution, the photograph breaks its loyalty with what is real, that unique marriage in the arts, only to fall into the infinite temptations of the imagination. . . With a little bit of sadness, an inevitable sense of loss, we wish it good luck on a journey which will surely be very fruitful." If there are more artists similar to Meyer using the medium, it certainly will be. **A** (*Janice M. Eisen*) ●

TECH SPECS

HURL INTO THE FUTURE



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- Head–to–head competition via modem or two computers networked
- Full track preview to analyze any of the ten exotic circuits.
- Intense replay features
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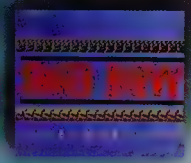






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cyber



The Internet Becomes Hollywood's Latest Onramp To Adventure

Ever since the computer in *War Games* asked the question, "Would you like to play a game?" Hollywood has flirted with techno-pics that cast computers in starring roles. In the age of the Internet, however, where real hackers are making their way into the deepest and darkest recesses of the net (and into the headlines), the big studios are pumping big bucks into a new genre of cyberthrillers.

Although many critics would argue that the merging of tomorrow's technology with today's leading stars got off to an unceremoniously bad start with the big-screen adaptation of William Gibson's *Johnny Mnemonic* earlier this year, that has done little to dissuade the suits at many Hollywood studios that the Internet is paved with anything but gold. The result is a battery of films now in development that feature computers and the Internet playing pivotal roles opposite such leading names as Denzel Washington, fresh from his tour of duty in *Crimson Tide* and Sandra Bullock who hopes to have better luck than her *Speed* co-star Keanu Reeves encountered as the lead in *Johnny*.

Why the sudden interest? Simple. The Internet is a hot topic from Wall Street to Rodeo Drive, it's recognized around the world (i.e., strong international ticket sales) and it gives tech-happy studios the marquee attraction they need to draw online users to their other properties. Among the films that Hollywood plans to dish up in the coming months:

Virtuosity (August 4)

Los Angeles, 1999. Police use a computer composite of 183 serial killers, Sid 6.7 (Russell Crowe), to train officers. When the cybercreep escapes into the flesh-and-blood real world, former cop Parker Barnes (Denzel Washington) is brought in to hunt him down.

"It's a cautionary tale about the use of this kind of technology, about how it can expand our minds and horizons and how it can also reflect the worst of what we've become," adds director Brett Leonard (*Lawnmower Man*). **(http://www.paramount.com)**

The Net (August 4)

Trading in public transportation for the Internet, Sandra Bullock stars as a computer hermit, toiling away at her keyboard when she stumbles upon a program that allows her to access any classified computer network in the world. The unscrupulous computer guru who keyed the code (Jeremy Northam) wants it back. Dennis Miller, who convincingly cut his teeth as a cyberwiz in last fall's, *Disclosure*, costars. **(http://www.spe.sony.com/Pictures/SonyMOvies/17net.html)**

Hackers (September 26)

Dade Murphy (Jonny Lee Miller), whose first hacking conviction came when he was 11 years old, is now an 18-year-old cyberpunk who hangs with a group of roller-blading, Soho computer hackers(!). After tapping into the files of the Ellingson Oil Company, they discover industrial espionage at the hands of a corporate security officer who frames Dade and his friends for the crimes.

(http://www.mgmua.com/hackers/index.html) ●

music

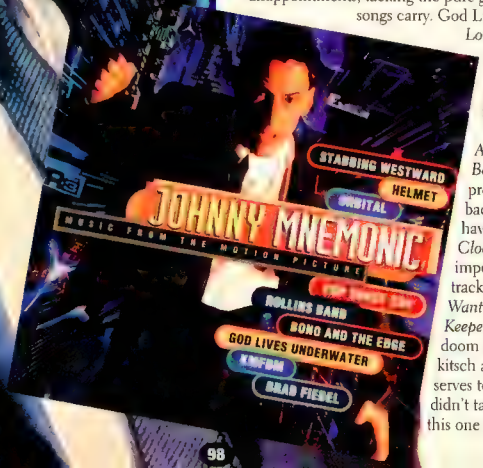
HOOKED ON MNEMONICS

The *Johnny Mnemonic* movie soundtrack makes it abundantly clear that Hank Williams Sr. and Chuck D have no place in the techno/industrial/punk future—and that's a sad thing. Perhaps rap and country have been wiped out in Gibson's world, like books in Ray Bradbury's *Fahrenheit 451*, but whatever the case may be, there's a certain "we're so progressive" attitude about this CD that's a bit much to bear at times. Even still, there are a few points on the soundtrack that come close to saving it. It's always nice to hear a new track from Cop Shoot Cop (who are perhaps best described as the birthchild of Big Black and Charles Bukowski) and while *3 AM Incident* doesn't rank among their all-time best tunes, these guys mix clanky bass and drums like nobody's business.

Then there's Stabbing Westward's *Lost*, which seems to envision a future where drums rule the Earth. It's hard not to like a song so obsessively percussive, but it's not quite as hard to feel let down by it. The vocals walk a frustrating midline where they could've either been drowned out more to make it more "ethereal" or brought up to understandable levels. With more work, this could have become the album's best track. In lieu of that honor, *Nothing*, (Stabbing Westward) becomes the high point of the soundtrack.

The Rollins Band's *I See Through* is pretty much just another of Rollins' "You've got a problem and I've got a problem with that"-type songs ... but he's still somehow able to pull it off time and time again and make it fairly entertaining.

Helmet's *Complete* and KMFDM's *Virus* count among the minor disappointments, lacking the pure *grab* the groups' stronger songs carry. God Lives Underwater's *No More Love* comes off like a Jesus Jones' song sung by Alice in Chains' Layne Staley ... which is as strange as you'd imagine.



While Bono and The Edge's *Alex Descends Into Hell For A Bottle Of Milk/Korova 1* is probably the most suited to background music for the film; having a title reference to *A Clockwork Orange* brings up an important point about this soundtrack: It really needs a song like *I Want To Marry A Lighthouse Keeper* to break up the all-pervasive doom and gloom. Sure, that song is kitsch and annoying as shit—but it serves to prove that that soundtrack didn't take itself half as seriously as this one does. ●

—Joe Fielder

© 1996



JABBA THE HUT GETS WORKED OVER AT ILM

Launch into a Medio Blender

'Zines Grow Up in the Digital Age ... with Mixed Results

Kids love interactive CD-ROM magazines—and as well they should. By entering the "hot spots" in these interactive mags, users can often access video and audio clips that often bring another dimension to magazines. Here's a partial look at what's out there for your perusal.



Launch
(Issue 1 Mac/Win)
Overview:
Instead of finding the usual contents page, users navigate through hot spots in a simulated city. By entering "buildings," they can access a variety of movie and video clips, album reviews and game demos.
High Points:
The town's unique music club, the Elang, features audio and sometimes video clip interviews with musicians such as Matthew Sweet (of the Lincoln Sweets) and Tonya Donnelly. In fact, they can even dictate several questions to Sweet and view a "live" performance of a previously unreleased album track.
Plus, there's an interactive Dewars' advertisement that just has to be checked out.
Low Points:
The two animated features, *Squirrely & Six Pak* (that's as interesting as the new *Ren & Stimpys*) and *Joey Noir* (an unhappy marriage between *Clutch Cargo* and computer animation) really aren't much to write home about

Medio Vision
(Vol. 2, Issue 5 Windows)
Overview:
Users enter at the contents page, which ranges in topics from Entertainment and News to Business, Sports and Science.
High Points:
Medio Vision is simply *packed* to the top with information—which goes to justify its meaty $9.95 price tag.



Low Points:
I didn't like how many of the news articles neglected carrying accompanying photos, making it appear like they received their copy from a news service.

Blender **(Issue 1.3 Mac/Win)**
Overview:
Blender is full of interesting topics. It's got interviews with actors and musicians, music and film reviews, fashion and comics—as well as several visual performances that combine art, music, architecture and poetry.
High Points:
The interviews feature interesting writing, good photography, visually compelling art direction and are interspersed with video clips. The performance pieces are really crazy while still coming off as very cool. Plus the Dewars' ad is here too!
Low Points:
The "7 Deadly Sins of the Internet" feature is just a fluff piece with good photography.

Judgement From On High:
Launch is certainly off to an interesting start and *Medeo* is quite interesting in its own right, but I have to say that *Blender* is the most successful marriage of CD-ROM and magazine formats I've seen yet. I recommend it wholeheartedly.

—Joe Fielder

External Correspondence



DOLLARS AND SENSE

Now that Saturn is out, and the PlayStation is coming soon, I've started to question the logic in how these systems are being priced.

First, I think both Sony and Sega are going to discover that, like 3DO, people aren't ready to throw down a week's wages for a video game machine. When will the masses be able to afford them? And if nobody beyond the gadget freaks comes to the bar, who is going to buy all that software that third-party licensees are making?

I bought an Apple 2+ computer way back in 1983 with 64K, a 5.25 floppy drive and a monochrome monitor for about $2,000. That was a state-of-the-art home system back then. In 1995, that same two grand will still buy the current state-of-the-art home system, albeit with much fatter power including CD-ROM, full color video, etc.

How do Sega and Sony get off charging 2-5 times what video game systems cost when the same amount of money buys me a computer that is exponentially superior to one I bought over a decade ago?

Technology is expected to progress over time. But that doesn't mean consumers are going to pay for it.

Jerry Cambell
Trenton, New Jersey

I WANT THE HEAD OF A MAN NAMED ROGER

What's the deal with Mortal Kombat 3? I know that the wizards of Williams really wanted to keep us all guessing with their third, fourth and fifth revisions to the game, but it really is getting to the point of making me want to puke.

Every time I go to the arcade I have to learn a different set of moves for this game just because Roger Sharpe from Williams wants to screw with everyone's brains on the Internet. Personally, I've had enough.

I don't care about the codes, the moves or the secrets anymore. Why should I? The minute I make a great "discovery" in this game, I can count on Roger and his staff to change the rules.

Trent Morrow
Columbus, Ohio

Ever since game magazines first appeared to unlock the secrets of coin-op games, the manufacturers and operators of those devices have concocted ways to keep the quarters flowing. While the advent of the Internet gives those who want to know the ability to share information instantly, the points you bring up are more important. Just as too many cooks can spoil the Spam, too many changes can make even the best games no fun to play.

But don't take it out on poor Roger. If it weren't for him you may never have gotten the chance to play a game called Mortal Kombat in the first place.

MR. SMITH DISSES WASHINGTON

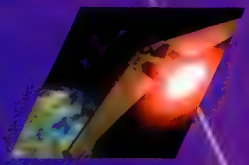
I have a real problem with the legislation being proposed by Congress to police the Internet. The Decency Amendments to the Communications Bill that recently passed open up questions that no government should be expected to address.

Do we want pornography weeding its way into the lives of our youth? Of course not. But what may have been developed to stop such transgressions could very easily mutate into something more sinister. The free flow of information is at the very foundation of not only the Constitution, but the Internet itself and attempting to moderate users based on their perceived decency is a problem with no clean-cut solution.

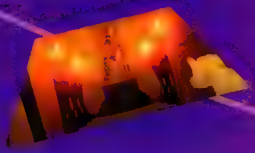
What's all of this have to do with entertainment? On any given day users can access information that instructs users on how to mutilate, maim and kill. Is it indecent? I don't think the makers of Mortal Kombat would think so.

Walter Smith
Canton, Ohio

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FALLOUT

The Internet is indeed a tricky animal. Without isolating the U.S. from the rest of the world (which no Congressional edict can overcome) it will be virtually impossible to police the Net to any degree of success.

For an opposing view, turn to the back of the book for the inside word from Presidential candidate Bob Dole.

WHAT'S THE FREQUENCY KENNETH?

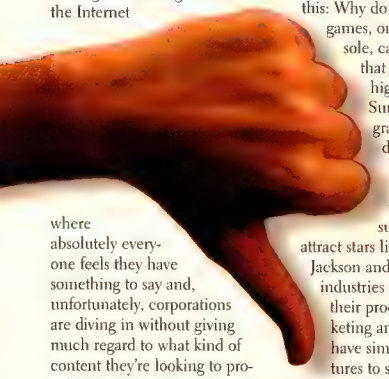
Could you ask Bill Gates if it is true that he has cloned himself?

Kenneth Demarco
White Plains, Georgia

Which one would you like us to ask?

THE INTERNET SUCKS

How come all of the corporate video and computer gaming sites on the Internet are about as much fun as a bowel movement? I think we're witnessing a disturbing trend on the Internet



where absolutely everyone feels they have something to say and, unfortunately, corporations are diving in without giving much regard to what kind of content they're looking to provide. God forbid any of these so-called "commercial" sites even consider bagging on their own wares.

For real gaming information on the Net, turn to Yahoo for a complete spectrum of sites prepared by absolute nobodies who are a hell of a lot more interesting than anything I've seen a marketing major churn out.

Mark Lewis
Arlington, Virginia

While some of the sites are truly hideous, most of the entertainment areas on the Net are fairly well maintained, with downloads, samples and other ways to communicate with various people within the companies (for a listing of some of the better sites, refer to the listing at right) We'd suggest that you check out some of these sites before making a final decision on how useful the Internet is in gathering electronic entertainment information.

IT AIN'T INFLATION

With all the hype surrounding the new consoles that are appearing in the next year that are CD-ROM based, I've started to question the economics of the titles these new machines will play.

The crux of my problem is this: Why do CD-ROM games, on the PC or console, carry price tags that are four times as high as audio CDs? Sure there's programming and development, but on the other hand there's not the ten figure sums paid to attract stars like Michael Jackson and Pearl Jam. Both industries have to support their products with marketing and both certainly have similar infrastructures to support. All of this brings me full circle back to my original question. Why do entertainment CDs cost so much more than audio?

Pat Matthews
Jacksonville, Florida

REACH OUT:

http this:

- **Sega Web** (http://www.segaoa.com/). This World Wide Web site has information on Sega games and how to order them. It uses lots of graphics from Sega products to illustrate the pages. At this point, Sega reps say they are not taking comments from customers on the Internet, so there is no e-mail address.

- Maybe it's symptomatic of the biggest companies, but Nintendo doesn't have an e-mail address either. Their web site has Nintendo product information, new press releases, links to interesting sites and more. (http://www.nintendo. com)

- **Spectrum Holobyte** (http://www.microprose.com/ index.html). This is a page with links that take e-visitors to pages with corporate info, new game info and a place to order games. They can be reached by e-mail at: support@microprose.com.

- **Electronic Arts** (http://www.ea.com/). This site has corporate information and product information. E-mail them at: www@ea.com.

- **Activision's Web Site** (http://www.activision.com/) is home to a big push for Mechwarrior 2, an on-line contest and no e-mail.

- **Lavamind** (http://www. best.com:80/~lavamind/) has a strange site with corporate info, game reviews, links to other sites and e-mail: info@lavamind.com.

- **Ocean Software** (http://199.4.94.16/ocean/) has game and corporate information. E-mail: ocean@aimnet.com.

- **Origin Systems, Inc.** (http://www.ea.com/origin.html) maintains a site with the usual corporate and game info, plus two free downloadable demos. E-mail them at: www@origin.ea.com.

- **Westwood Studios** (http://westwood.com/) A good amount of effort went into this site setup. E-mail them at: virtualed@westwood.com.

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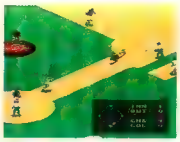
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Sterling Sharpe END 2 END

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FALL OUT

FEELING ALIENATED

Like many, I pay a lot of attention to hype about new stuff. I don't always rush out and buy the newest games or hop on the new technology bandwagon right away, but I always like to know what's happening.

I've been hearing about all the new consoles, but I feel like the forgotten man too much of the time.

I know there are a lot of adult gamers, because magazines like yours tell me so. You'd never know it from the ads I see though.

The ads cater to idiots. Do they expect me to identify with some pop-eyed little punk shrieking "Sega!"? I do. Video gaming has had some trouble with Congress in the last couple of years, and these commercials are part of the reason.

Senators are talking about making electronic gaming safe for kids as though there wasn't a sizable audience, and he got his ammo from the industry's advertising.

Game ads are stupid and advertisers shouldn't be surprised when Congress treats gaming like it's an alternative sport for pre-teens.

The companies have dug their own hole. They're making me feel like the star of a Frosted Flakes commercial.

Sure kids are important customers, but so are people like the wife, dog and myself.



Bryan Lenci
Joliet, Illinois

A lot of electronic entertainment marketing does seem to be slanted toward the wee folk, but that should change as electronic entertainment continues to cater to an ever-growing audience of adults.

I wouldn't count on the days of publishers selling software by painting pages with blood "splatters" to end as long as people think that's why Mortal Kombat is so successful.

As far as Congress is concerned, I don't think you have too much to worry about. The only thing deadlier than taxing Social Security is invoking censorship into law. Just wait a couple of weeks and they'll find some other politically correct issue to crusade against.

CONTACT FUSION

Thanks, everyone, for writing. We welcome your cards, letters and e-mail—the more the merrier! Send your snail mail to

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Las Vegas, NV 89107

And e-mail should go to: **fallout@fusion.com**

Web Site of the Month

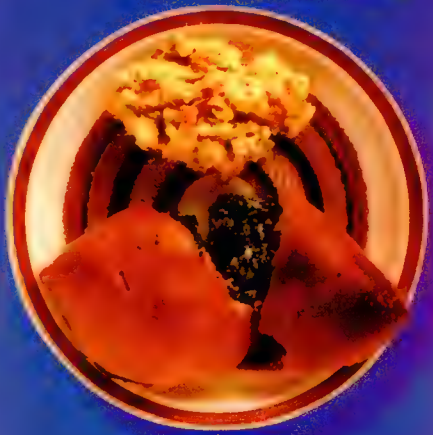
"... don't forget to check out what Sho's having for lunch ..."

The month's Top Web Site of the Month comes from Useless Web Pages (http://www.primus.com/staff/paulp/uselesshtml)

Paul Phillips, executive director of the Useless Web Page, began the site when he found someone had created a web site listing their entire CD collection. For Phillips, this was the first web site he'd seen that "exactly crossed the line from incredibly brainless to truly inane." Because he loves you all (incredibly), Phillips created the Useless Web Pages site—which serves to link the user to noteworthy Useless Pages on the Web.

Notable Useless Pages featured in the site include pages that regularly tell what Purdue University graduate student Sho Kuwamoto is eating for lunch (at press time, a grilled cheese and potato salad), updates on some young chap named Rob's dating life (a poll is included on whether he should stay with his current "sonicate," or not) and a second-year engineering student's page, which, oddly enough, we forgot everything about after visiting. Other pages include a site where a friendly host invites you to talk to his cat, a site devoted entirely to beard research and the always-humorous "click here to learn how to keep an idiot happy."

Phillips has also given users the opportunity to take a look at that hallmark CD listing that started it all in the Useless Pages Hall of Fame. But don't forget to check out what Sho's having for lunch first. If we don't receive new lunch eating news, what will?



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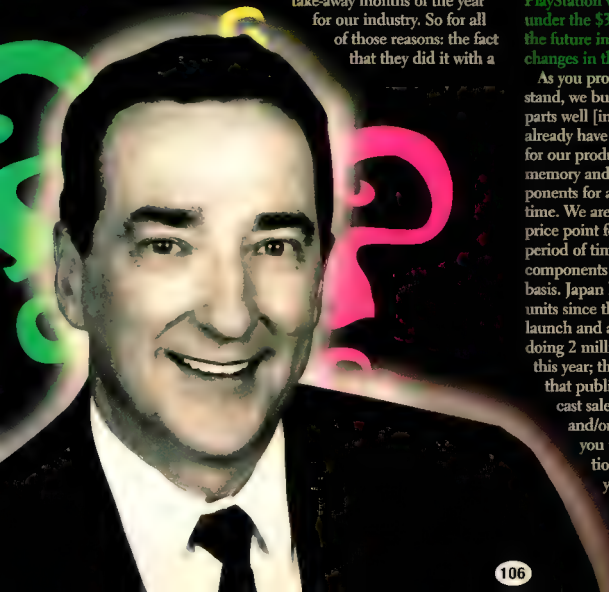
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3 Questions with Steve Race

Steve Race is in a unique position within the electronic entertainment industry. Sitting atop Sony Computer Entertainment and in charge of launching their upcoming PlayStation system, Race carries the future of all gaming squarely on his shoulders. With just weeks to go before the launch date of the PSX, Race answers his critics and talks about the future of video games.



1. Does Sega's head start hurt Sony's chances for success?

They only shipped very limited quantities to a very limited number of retailers, three or four depending on how you want to count, and in doing so I think they have, based on our conversations with much of the trade, alienated many of the other accounts that they are not bringing the product into. So while they have a slight head start in terms of first launching a next-generation product in the United States, it is a relatively narrow window of opportunity. Frankly, they've launched in the slowest retail take-away months of the year for our industry. So for all of those reasons: the fact that they did it with a limited number of retailers, the fact that they have alienated other retailers by doing so and the fact that it's in the slowest time of the year and they have not been able to support the product with a lot of software, I think it doesn't hurt our chances at all. I think in doing so they have alienated some of the third-party software community, because these software providers couldn't have their software ready. So it was a full Sega party, if you will, with no one else invited to it.

2. Do you think the PlayStation will be able to hold under the $300 price line in the future in view of the changes in the yen?

As you probably can understand, we buy our component parts well [in advance], so we already have locked in prices for our product in terms of memory and short-supply components for a long period of time. We are confident in our price point for an extended period of time. We stockpile components on a worldwide basis. Japan has done a million units since the December launch and are talking about doing 2 million units in Japan this year; they've announced that publicly. We don't forecast sales in the U.S. and/or Europe, but if you use your imagination and add it up, you can see we've bought a lot of component parts.

3. What advantages does the PlayStation have because it comes from Sony?

I think there are a number of advantages. We think there is real leverage in being part of the Sony family in some of the back-office stuff, in some of the activities that we have relative to our consumers. Let me give you some examples: The product is being produced in a sister-company plant that produces camcorders and videotape machines. It will be taken by our American company, taken through customs and cleared by them and then distributed into two of our music warehouses. We will place orders on those music facilities and send the product to our retailers. In the warranty, the consumer will be able to take it into any Sony authorized repair center should the need arise and be able to get warranty or repair services. We see the advantages, through many of these back-office things, in addition to the knowledge of the consumer and our ability to do cross promotions with some of our sister companies. For example, we will be on a number of home-video products shipping in September. Plus the purchasing power, the distribution clout and the knowledge of the consumer that only a $40 billion multimedia entertainment company can bring to the party. ●

Steve Race is president of Sony Computer Entertainment

FUSION READER SURVEY

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NAME_____

ADDRESS_____

CITY, STATE _____

ZIP CODE_____

TELEPHONE (___)_____

1. What is your age?
 a. Under 11 — d. 25-34
 b. 12-17 — e. 35-49
 c. 18-24 — f. Over 50

2. What is your sex?
 a. Male — b. Female

3. Do you use a personal computer?
 a. At home only — c. Both home and work/school
 b. At work/school only — d. None of the above

4. What type of computer do you use? (Circle all that apply)
 a. IBM/Compatible — e. Commodore
 b. Macintosh — f. Apple (Non-Mac)
 c. Amiga — g. Tandy/Radio Shack (Non-IBM)
 d. Atari

5. Which of the following do you spend most of your time doing?
 a. working in an office
 b. watching tv
 c. lounging at the beach
 d. forming tunnelvision in front of a computer
 e. repeating, "It's just a dream! Please, god, let it be just a dream!"

6. What kind of PC do you own?
 a. 286 — d. Pentium
 b. 386 — e. Other
 c. 486

7. What is the speed?
 a. 33 Mhz — d. 75 Mhz
 b. 50 Mhz — e. 100 Mhz
 c. 66 Mhz

8. Do you plan on buying a new PC in the next 6 months?
 a. Yes — b. No

9. Do you plan to upgrade to Win95 within 6 months of its release?
 a. Yes — b. No

10. How do you gain access to the Internet?
 a. America Online — d. School
 b. CompuServe — e. Private Internet provider:
 c. Prodigy — ____

11. How often do you use the Internet?
 a. Daily — d. Less than once a week
 b. Couple of times a week — e. Do not use
 c. Once a week

12. If you were to have the opportunity to run one organization in the world, which one of the following would you choose?
 a. the government — c. local moose lodge
 b. the mafia — d. Microsoft

13. What types of software do you use regularly?
 a. Games — e. Reference
 b. Education — f. Business
 c. Children's — g. Communication
 d. Entertainment

14. Which of the following accessories do you currently own?
 a. Graphics board — f. Joystick
 b. Internal/External Modem — g. CD-ROM drive
 d. SVGA Monitor — h. After market speakers
 e. Sound board

15. Which of the following accessories do you plan on buying in the next 12 months? (Circle all that apply)
 a. Graphics board — f. Joystick
 b. Internal/External Modem — g. CD-ROM drive
 d. SVGA Monitor — h. After market speakers
 e. Sound board

16. Which video gaming system(s) do you own? (Circle all that apply)
 a. Nintendo — i. PC
 b. Super Nintendo — j. Game Gear
 c. Ultra64 — k. TurboGrafx
 d. Game Boy — l. NeoGeo
 e. Sega Genesis — m. 3DO
 f. Sega CD system — n. Atari Lynx
 g. Sega Saturn — o. Jaguar
 h. PlayStation — p. None

17. Where do you purchase your software?
 a. Electronics store — e. Mail order
 b. Record store — f. Department store
 c. Video store — g. Other:
 d. Toy store

18. How much do you spend on software annually?
 a. $0-$250 — d. $751-$1,000
 b. $251-$500 — e. $1,001-$1,500
 c. $501-$750 — f. $1,501-$2,000

19. How often did you attend the movies in the last 90 days (3 months)?
 a. Once a week
 b. 2-3 times a month
 c. Once a month
 d. Less than once a month
 e. Did not attend any movies in the last 90 days

20. Which types of movies did you see in the last 90 days? (Circle all that apply)
 a. Action/adventure — f. Crime/detective
 b. Comedy — g. Western
 c. Science fiction/fantasy — h. Drama
 d. Suspense/horror — i. Other
 e. Animation

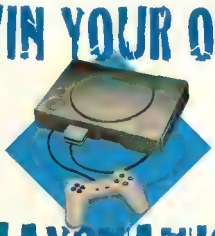
21. If you believe in Hell, which plane do you figure most people end up in?
 a. Gehenna — c. Tartarus
 b. Pandemonium — d. Pittsburgh

22. Which of the following do you or other household members currently own? (Circle all that apply)
 a. Rack System
 b. Cassette recorder/player
 c. Compact disc player
 d. Laserdisc player
 e. Projection TV (over 35")
 f. Pocket-size radio/cassette player
 g. Personal stereo (e.g. Walkman)
 h. Portable radio/tape player
 i. DAT (Digital Audio Tape) player
 j. Video cassette recorder (VCR)
 k. CD-i (video)
 l. Home theater
 m. Receiver/amplifier
 n. Camcorder
 o. None of these

23. Which of the following types of music have you bought in the last 12 months?
 a. Alternative — i. Hard Rock
 b. Country — j. Rap
 c. Easy Listening — k. Soft Rock
 d. Dance/Top 40 — l. Classic Rock
 e. Folk — m. Urban Contemporary
 f. Jazz — n. 1960s nostalgia
 g. Blues — o. 1970s nostalgia
 h. New Wave — p. None of these

24. If you're of legal drinking age, which of the following beverages have you personally drank in the last 6 months?
 a. Beer — d. Hard liquor
 b. Wine — e. None of these
 c. Mixed drinks

25. If you could meet one famous person throughout history, which of the following would it be?
 a. Marilyn Monroe — d. Joe Stalin
 b. Jim Morrison — e.Cassius Clay
 c. Ru Paul



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26. If over 18, which of the following kinds of tobacco do you personally use?
 a. Cigarette — d. Chewing/smokeless
 b. Cigar — e. None of these
 c. Pipe

27. Do you buy/subscribe to any of the following magazines?
 a. Wired — d. Internet world
 d. Next Generation — e. Ray Gun
 b. Electronic Entertainment — f. Multimediaworld
 c. Home PC — g. NetGuide

28. Which sections of FUSION were you most interested in?
 a. Fusion.Com (news) — d. Console/Comp. reviews
 b. Fallout (letters) — e. Culture Shock (lifestyles)
 c. The Net — f. The Reactor(Web site info)

29. How many people read your copy of FUSION?
 a. 1 — d. 7-8
 b. 2-3 — e. 9 or more
 c. 4-6

30. What is your current marital status?
 a. Married — c. Widowed
 b. Single, never married — d. Separated/divorced

31. Do you have children?
 a. Yes — b. No

32. If Yes, how many?
 a. 1 — b. 3
 b. 2 — c. 4

33. How old are your children?
 a. 1-5 — c. 11-15
 b. 6-10 — d. 16 and older

34. If you were to wear diapers yourself, which kind would you use?
 a. Luvs — c. Huggies
 b. Pampers — d. cloth

35. What is the highest level of education you have completed?
 a. 1st through 8th grade
 b. Some high school (grades 9-12)
 c. Graduated high school
 d. Attended college less than 1 year
 e. Attended college 1-3 years
 f. Graduated from 4-year college
 g. Post graduate study without degree
 h. Post graduate study with degree

36. Please circle the letter that best describes your total annual household income:
 a. under $10,000 — h. $40,000-$44,999
 b. $10,000-$14,999 — i. $45,000-$49,999
 c. $15,000-$19,999 — j. $50,000-$54,999
 d. $20,000 -$24,999 — k. $55,000-$59,999
 e. $25,000-$29,999 — l. $60,000-$74,999
 f. $30,000-$34,999 — m. $75,000-$99,999
 g. $35,000-$39,999 — n. $100,000 or more

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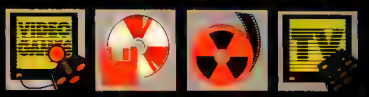
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DETONATION BEGINS...

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Copy Protection Chaos! Can You Be Trusted?

It's been about six years now since I wrote the only award-winning article I've ever written. It was an article on a subject whose time was right. It was also an article that cost me a solid punch in the nose from an irate advertiser/publisher. It was about copy protection.

As luck would have it, the timing of the article couldn't have been better. Soon after its publication, copy protection in games finally started to slide toward extinction. Publishers had always predicted impending doom if copy protection was abandoned. The industry not only survived, but prospered in spite of those beliefs. Gamers responded both positively and responsibly to this new-found freedom. The last few years have been relatively copy-protection free. It was a great hiatus, but the vacation is over. Unfortunately copy protection is on its way back from an unlikely candidate, CD-ROM.

CD-ROMs brought several benefits to gamers and publishers. For the gamers its increased capacity brought more complex, deeper games and an end to heavy disk swapping during installation. On the publisher's side, it brought much-needed capacity, dramatically lowered the shipping weight and size requirements for packages, reduced the costs of the medium significantly and last, but far from least, brought built-in copy protection. At the hopeful beginning of the great CD-ROM revolution, publishers were quite happy to have a cheaper, simpler medium to work with that they totally ignored copy-protection issues.

For a while you could benefit from a simpler install and copy off an entire game to your hard drive (drastically speeding up the game play). Most games don't come close to using the full capacity of the disc.

"Unfortunately copy protection is on its way back from an unlikely candidate, CD-ROM."



But developers soon realized this also meant it would be easy for people to illegally copy games, so two things started happening. First we started seeing a bunch of full-motion video sequences that are not only there for game play but—and don't you believe otherwise—are often there just to validate the use of a CD-ROM and keep you and me from easily copying the game onto our hard drive. The other thing was a conscious choice on the part of the developer to force the game to be run from the CD-ROM even if you have the space to run it.

On the plus side, you have MicroProse X-COM 2 shipped on CD-ROM, but it included a special hard drive install that installed a fully functional version to your hard drive.

The hard drive install option loads everything but the large animation files you get when playing from CD-ROM. However, you can also, if you *really* know what you're doing with DOS, get the *whole* game to run from your hard drive.

Then you have some bad examples. **Dark Forces** comes on CD-ROM and more people have the 70MB of space that **Dark Forces** needs. However, LucasArts seems to have taken steps to keep you from doing so. You have to jump through some hoops to make it work but it's possible with enough creative manipulation and knowledge of computers.

Copy protection in most forms is unacceptable and the consumer has shown that, by and large, he can be trusted without it. Let's not allow this trend to pull us all back into the Stone Age. ●

Rich Heimlich is a decent man from a good family. So where did things go so wrong? Nevertheless, the opinions expressed are not necessarily those of this magazine.

"... Game Developers Conference transformed itself into the Game Developers Meat Market ..."

GROUND ZERO

Chris Crawford

They call it the Game Developers Conference. It was started many years ago by an enthusiastic fellow named Chris Crawford, an Atari evangelist in the early days of computers and one of the genuine legends in the industry. Chris has always enjoyed sharing what insight and analysis he could find with others. He has published and edited an industry magazine on the subject of game design forever and has watched the GDC evolve from a small gathering in his home to a major money maker in less than a single decade.

Hereafter, however, Chris will be watching his brainchild grow (and grow it will) from the outside looking in. This year's show opened with an announcement by Chris that he was no longer associated with the GDC. The industry was more or less stunned but not surprised. When someone is as intimately associated with an event and/or organization as Chris has been with GDC, it is always a shock when their ties are severed. But surprise? That was another matter. There have been mutterings for years, after all, that Chris was growing increasingly remote from modern game development. His own admitted difficulties with the concept of developing games as a team, rather than the sole creator, led him out of the mainstream as an active designer.

But I can't help but feel that there were other forces at work here. Longtime readers may recall my misadventures last year when I finally decided to attend one of these legendary events but waited too long and got locked out. I called Chris personally, having known him for years, and asked if he could do anything. He told me he couldn't. He said he'd go before the board and make the request, but that it wasn't likely to do any good. I told him not to worry about it. It was getting too big, Chris told me. It was getting out of hand.

Obviously.

Of course, what *really* happened is that the Game Developers Conference transformed itself over the years into the Game Developers Meat Market. With thousands in attendance, the GDC staged patently ludicrous "workshops" that held approximately 30 people. Ah, but even for those unwilling to camp outside a meeting room door for an hour, there was surely valuable insight to be gleaned from the seminars? Unfortunately, rather than staging these get-togethers in panel format with a moderator, attendees got to listen to a single, usually ill-chosen speaker gas off in a huge auditorium.

The panel format gives voice to a spectrum of opinion, while the moderator can always steer the discussion away from dead ends. Not here. At the '95 GDC, it was one long-winded diatribe after another.

Not that anyone was really interested in these spout sessions, anyway. The real action took place in the lounge. All you needed to do was pick out a table and wait for the world to pass by. There was gossip everywhere, of course, with Chris and the GDC in general the most popular subjects—at least for the first day or so. Unhappily, even some of Chris' supporters seemed to feel his farewell speech was a trifle ... tacky. But the real business was, of course, business.

By far the fastest-growing segment of GDC attendee these days, however, is the headhunter. Headhunters, for the unenlightened, are (in this context) agents hired by publishers or development groups looking to acquire designers, programmers, artists and/or musicians. For a headhunter, an event such as the GDC is good for hunting, indeed. I ran into a man who was formerly the president of two major video game companies. When I asked him what he was doing, he lowered his voice: "I'm a headhunter now," he said.

"Isn't everyone?" I thought.

The one type of critter that you won't encounter nearly as often at GDCs, however, is the developer. The artist. The people who started the organization in the first place in order to get together once a year to talk about their art and their craft. After all, no development house wants its talent walking around in that kind of environment. No, better they stay home; after all, there's probably a product on deadline.

The few developers who can be found are almost always accompanied by company people. The employers don't want their employees talking to the wrong people. In short, they really don't want their developers attending a developer's conference for obvious reasons. But they'll be happy to purchase an extra membership for their marketing guy.

Evolution is an ironic thing, sometimes.

Senator Robert Dole Unplugged

Possible Next Prez, Bob Dole Takes Aim at Sour Culture

Decency has suddenly become a hot topic in Washington D.C. Not only has Congress taken a successful first step toward attempts to actively police the Internet, but Presidential hopeful Senator Bob Dole (R-Kansas) began defining his campaign by attacking the entertainment industries and the corporations that support them. Like the debate over the Internet, the thrust of the Senator's words were that corporate responsibility must take place if true decency is ever to be achieved.

"One of the greatest threats to American family values," Dole says, "is the way our popular culture ridicules them. Our music, movies, television and advertising regularly push the limits of decency, bombarding our children with destructive messages of casual violence. ... I concluded that we must hold .. the entire entertainment industry accountable for putting profit ahead of common decency."

Much of the presidential hopeful's words were targeted at Hollywood and big corporations like Time Warner in particular. But the thrust of his argument could be transposed onto the electronic entertainment and online communities that are growing increasingly dependent on greater levels of violence to satisfy consumers.

Ridding the world of make-believe violence and sex is a noble cause to be sure, but one that in the shadowy recesses of the Internet will be less and less likely ever to be achieved. Because even if all of the Time Warners of the world do heed Dole's words of caution, the Internet allows *individuals* to occupy the same stature as commercially funded enterprises searching out new customers via the worldwide post-it board. Will future governments – one perhaps led by Bob Dole himself—then suggest that these same individuals who gave birth to the commercialization of the Net because of who they were and when they were born, be chided or perhaps even regulated the way profit-seeking enterprises are watched now?

Thankfully, Bob Dole is not suggesting that measures of decency be legislated. Dole speaks openly of the need for old-fashioned common sense in an age where profits, he feels, are often viewed as the more important goal. Although Dole doesn't advocate political measures to rate the Internet or any other form of entertainment, however, others do. The degree to which these groups lobby for reform will shape the landscape of the debate yet to come

What about the argument that products such as Mortal Kombat and Doom sell because they provide users with experiences worth paying for? Dole doesn't buy it.

"Please don't answer that you are simply responding to the market," he says. "That is not true. In the movie business ... the most successful and profitable films are the ones most friendly to the family."

On the other hand, the furor over decency and the Internet is founded in a mish-mash of real examples, overblown hyperbole and flat-out misinformation. The number of politicians who have been shown questionable material cultivated from the Internet is likely quite large since it is very easy (and politically rewarding) to find. The number of congresspeople who actually spend time navigating the Nets to locate more rewarding fare is likely far smaller because the political benefits are much smaller.

With elections on the way in '96 you can bet that issues of video game violence and online content will be raised by those seeking office. Whatever the eventual outcome of these debates is, for the moment Dole has seized an opportunity to make a statement and define himself.

Dole has also raised the public consciousness of what we, as people, will face in the coming years as technology continues to invade our everyday lives and shape the way we play. He raises more important questions, however, about individual responsibility and the absolute need for the indelible line between big government and individual freedoms -whether they're on the Internet or not— to never become blurred.

"Ours is not a crusade for censorship," Dole explains, "it is a call for good citizenship."

"... I want the leaders of the entertainment industry to think about the influence they have on America's children ..."



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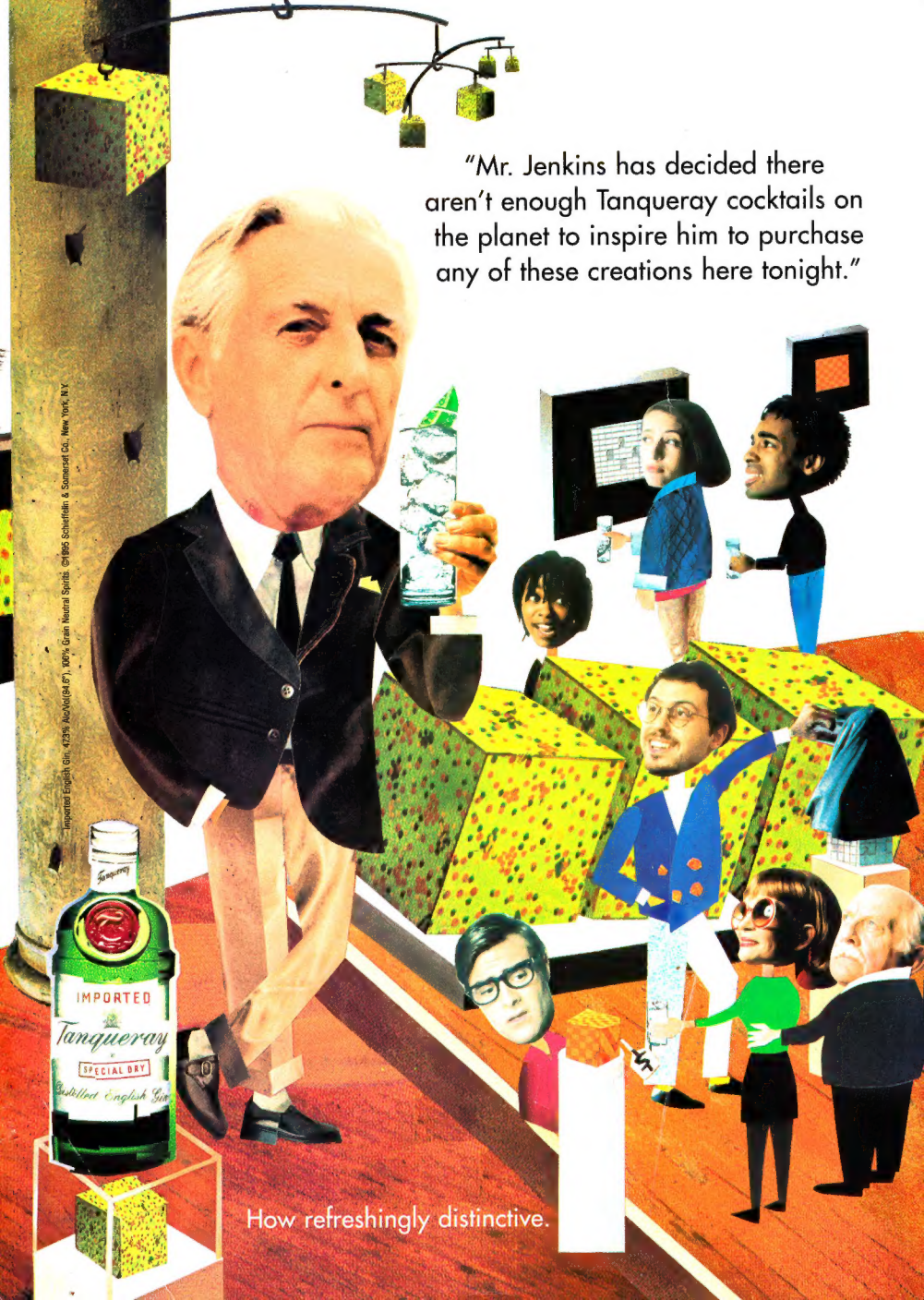
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